MAY/JUNE '88
Vol. 4 No. 3
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The SINCLAIR Computer Technology Magazine

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ISSUE

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The Sinclair Survivalist Handbook is a new 70 page book that is filled with previously un-published program listings and articles, written by regular contributor's to TIME DESIGNS, for the TS1000/ZX81, TS1500, TS2068, and the Sinclair QL. Examples include: "Adapting external keyboards to your TS1000", "BASIC Line Delete Utility", "Strategic Football", "Fix Your TS2068 Space Bar", "OS-64 Utilities", "Little League Scheduler", "Homemade ROM-Switch", "Draw Poker", "QL Super-BASIC Tutorial", "Using Quill With The QL Printer", "Inside the QL", and much more! If you like TIME DESIGNS...you'll like this new book. Order your copy today!

9.95

TIME DESIGNS

The SINCLAIR Computer Technology Magazine

MAY/JUNE '88

Time Designs Magazine Company
29722 Hult Road
Colton, Oregon 97017
USA
(503) 824-2658
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From The Editor

"CH..CH..CHANGES"

Collecting all of the data for the user group and dealer listings really took a lot more of our time than I anticipated. Thus, our production schedule for TIME DESIGNS is off a bit. I hope that you will find these listings to be a valuable resource. We will be picking up our speed here to get back on track.

Our east coast subscribers suffer the most, with some issues taking four to six weeks for delivery. We find this service deplorable, especially since postage rates have increased considerably.

To cure this problem, we are in the process of obtaining SECOND CLASS mailing priviledges (reserved for magazines and periodicals). What this will amount to, is that the magazines will be processed just like FIRST CLASS mail, and our postage costs will be less in the long run. The drawback to this is that there will be more processing work when we mail on our end, and it also requires a large initial investment. We are submitting our application and a sample copy of TDM to the regional Postmaster for approval.

Please, we need YOUR help. It is VERY important that we keep our circulation rate up and continue to grow in order to obtain this better level of mail service. YOU are our best source of advertising (by word of mouth). Please encourage your friends, fellow user group members, and other associates to subscribe to TDM. If you happen to read a "borrowed" copy...why not send for your very own. It's only $16.95. Not a whole lot to spend for some decent computer information.

We are having to raise our foreign subscription rates to $18.95 for surface mail. This will affect those customers who live in Canada, South America, Europe and elsewhere. We just couldn't absorb the recent raise in international mailing rates.

I forsee no raise in our annual subscription rates for the U.S., as long as we continue at our current level of pace. Perhaps even with the advent of the Z88 laptop computer (and other upcoming Sir Clive inventions), we may pick up some "new blood". I will also try to solicit advertising from software and hardware producers based in Great Britain. But over all, you could help us in a big way, by making sure that every Sinclair user you know is receiving their own TDM. You will benefit from faster mail delivery and a healthy magazine.

ADVENTURES

Doing the research for the User Group and Dealer listings in this issue was indeed an adventure. I spent hours on the phone tracking down possible leads, working off of old lists that were published while Timex was still in business. (Remember the User Group list in SYNC?) When my accountant sees the phone bill for the past month, he may have to be placed in a padded room!

I'm hoping that it was worth it, and that these lists will become the definitive work in this area. What we ended up with was 55 active Timex Sinclair User Groups, and 94 companies who still support our orphan line of computers. I personally feel that this is quite amazing.

Researching the User Group list was a little like playing "detective". Most of the time, I would reach a dead end, or get some well-meaning chap on the line who would declare "Timex group? Oh, no. That group broke up years ago...you know...you just couldn't get anything for them anymore". Or, "we lost our meeting space..and I guess that was it". (That one seems like a flimsy excuse).

A lady told me that "my ex-husband once had a group, but I don't even know where he is now, or care for that matter." Then angerly added, "one day he came home and found his old beloved computer all smashed to bits on the front steps!!" (Good Grief!?)

THANK YOU IS IN ORDER

Again, I wanted to say thank you to Ralph Hammer of Las Vegas, Nevada for putting the bug in my ear about having an issue devoted to TS User Groups. He designed the excellent front cover logo (and several of the headings throughout this issue). It is his wish that the front cover logo design be put into the Public Domain for any group to use freely for hats, pins, or whatever, to help promote better national recognition.

MASS STORAGE AND GRAPHICS TWO

Don't forget, that next issue is devoted entirely on means of safely storing and retrieving data. Naturally floppy drives will be one topic of discussion, but you tape, NVM, and microdrive cartridge users shouldn't be disappointed either. One request I have had (and I hope will be implimented) is an introductory type article on the use of disks and an overview of the different systems available.

Then looking beyond to the issue after, we will be featuring "Graphics Two". This will enable us to publish all of the great art utilities that didn't make the first graphics theme issue due to a lack of space.

HELP SYD WYNCOOP FIND A JOB

Well not exactly a real job, since the one he has already is pretty darn good. Were talking about his new role here at TIME DESIGNS. He will be heading up a new regular column that will be focusing on "Programming Problems". It will be in the Question and Answer format like Joe Williamson's TS COMMUNIQUE which deals with hardware and repair problems, only Syd's column will deal with software and programming. So let's help Syd get started. He has expertise in both BASIC and Machine Code, and just might be able to offer you a solution to something you have been baffled by for some time. Send your TS1000 or TS2068 related programming questions to Syd Wyncoop, in care of TIME DESIGNS, 29722 Hult Rd., Colton, OR 97017.

A NOTE OF SADNESS

A short time ago, I received a notice in the mail that simply stated, "With deep regret, the family of Cedric Ronald Bastiaans announces his death on Saturday, the thirtieth of April, Nineteen hundred and eighty-eight".

Avid TDM readers know that Cedric was the author of the popular PUZZLE OF THE MONTH column. Just reading through an installment of one of the puzzles reflected his intelligence and attention to detail. I personally corresponded with him on several occaisons and admired his knowledge of electronics and computers. I believe that he worked on the team that invented the cassette tape. Cedric also was very active in both the LIST (NY) and Harrisburg (PA) User Groups. He will be greatly missed. Our sympathy goes out to his family.

I have one more "puzzle" to publish after the one that appears in this issue.

SEE YOU AT THE SHOW

I hope that as many of you that can will attend one of the Timex Sinclair conventions this summer. It is a great way to learn and obtain some great stuff for your computer hobby. Those west of the Rocky Mtns and even further can drive (or fly) out to the West Coast show which will be held in Portland, Oregon; and those dedicated folks in the Cleveland, Ohio, mid-west area can drop in on the action there. Until next issue....keep computing!!

- Tim Woods

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In our Mailbag

MORE ON THE TS - PC CONTROVERSY

Dear Tim,

Recently there has been much discussion about featuring some IBM PC related material in Timex Sinclair publications. Personnally I would hate to see this happen. I understand the problems of a shrinking user base; and I understand the siren call of millions of PC/PC Compatible users. But seriously, is there anything a TS publication could offer a PC user that isn't already being offered? The answer is no! The odds of a TS publication being able to attract a PC user (unless said user is also a TS fan) is almost non-existent. Such a shift in editorial content would only antagonize die-hard TS users, while offering little to the "double-dippers".

The problem is that the PC market and the TS market are worlds apart philosophically. The PC user, generally speaking, is business oriented, able and willing to spend more on equipment and software (do I hear that siren call again?), and not the least interested in do-it-yourself hardware projects. The PC user expects to buy a complete system, plug in a diskette, and go to work. Have you ever noticed that few PC magazines have program listings? And no hardware projects, either.

The TS market, on the other hand, is a hold over from the original hacker movement of the 60's and 70's. TS users would rather do it ourselves. We delight in taking what most would consider an obsolete system and making it "state of the art". I wish I had a dollar for every time a co-worker has asked, "A Timex? Why do you use that toy? Why don't you get a real computer?" My answer remains: Because it's fun...that's why!" As Fred Nachbaur pointed out, I have a chance of truly understanding a ZX81. After an eight hour day working with products of the "Big Blue", I am ready to enjoy the frustrations of a soldering iron and schematic. Man derives delight from creating and doing; solving problems is extremely satisfying! Our technological age has removed the opportunity for problem-solving, for the simple act of creating. Such activities as modeling, painting, sculpting, and TS hardware/software hacking give us back some of that lost creativity.

Obviously, this leaves you (and other TS suppliers) out on a limb. In order to remain viable, in an age of increasing costs and declining profits, you and every other TS related business must increase you customer base. However, in my opinion, attempting to reach out to a PC market would only result in sawing off the limb behind you!

Personally, I believe a better answer might be to address all of the orphans. For example, Coleco Adam and Texas Instrument users are in the same boat as TS Users. An effort to bring together all orphaned owners could only result in a renewed interest in all of these machines. I recently acquired a TI99 in a trade. How nice it would have been to have a common source of information, hardware and software! Anyone who bothers to retain and use one of these "classic" computers possesses at least a little of the "Hacker Ethic". Perhaps we should pool our resources? At least we would share a common goal and purpose, one we do not share with the average PC user.

Finally, in closing, I would like to congratulate you in your efforts to continue to serve us, the family of TS users. I would also like to thank the suppliers who continue to give us, the TS user, new products, old products, reasonable prices, and a new "lease on life" everyday.

Edward Snow
Orlando, Florida

Editor: I'm glad your letter came in this week, as it will allow me to clarify our editorial policy. Some letters received recently, lead me to believe that there was some confusion as to what I was saying in the article entitled "Send In The Clones" (see TDM, Jan/Feb '88). To restate: "At this time, I feel that to include IBM information as part of our regular format in TDM isn't really necessary. There are already hundreds of PC publications, but only a few for the Timex Sinclair...TIME DESIGNS will remain a Sinclair magazine".

I'm not sure how folks have concluded that we are "switching over"...but the fact is, this is simply not true (one particular gent wrote: "I hope that your transition over to the other brands of computers is a slow one...I still enjoy my Timex".). Jee Gads! Maybe their confusing us with somebody else.

Ed, while I agree with your excellent letter entirely, I still feel that it may be possible to interest those subscribers who have gone on to bigger computers to stay with us here at TDM, simply for the fact of their Sinclair "heritage". Even though I now own a foreign import automobile, I am still very interested in "classic" Chevrolet hot rods that I followed as a young person. Maybe I am totally off-the wall, and even dead wrong. But don't you think the PC converted ex-Sinclair person would be interested in what's going on in our little neck of the woods? (Such as news about what Sir Clive is dabbling with, perhaps a do-it-yourself project using surplus PC parts, or even the compatibility link between say the Z88, or the QL, with other computers.) I have been pursuing this issue even in our promotional literature...to try and attract, and bring back to the "fold" these ex-TIMEXers. I know that the purist Sinclair folks, and even the "double dippers" (borrowing your phrase) to some extent are good customers...but is it too presumptuous on my part to assume these prodigals would ever spend $16.95 to get our mag?? I would like to hear from those folks who right now are on the tail-end of their subscription with us and have traded in for new equipment. Will they re-inlist for another year?

The "other orphan" issue is an interesting one, and has been recommended to me before. I understand that there is a large contigent of Adam users who are dying to find resources for their favorite computer brand. I think much marketing research would need to be done before any conclusion could be drawn about adopting these other orphans. I would be interested in hearing from anyone who is in touch with the "other orphan" markets, concerning, what other publications are available, are any dealers still catering to them, and what the estimated number of users might be?

DON'T LET 'EM BURN!

Sirs,

First, I would like to commend you on producing the best Timex Sinclair magazine ever! So much information, it is like being a member of a user's club. Should my house catch fire, save the TDM issues please, Mr. Fireman.

Secondly, does anyone out ther know of a product similar to the EPROM programmer produced by Orme, in the U.K.? I read a description of the board in an old Sync issue (May/June 1983, page 36), where you just poked the values into the 8192-10239 area, and the chip was then programmed. Sounds perfect to me. I have not had very good luck with ordering overseas, and hope someone on this side knows about it or a similar product.

Has anyone built the 64K Buffer/Programmer that was in Radio-Electronics Magazine (August 1985, page 59, and continued to September 1985 page 78)? I have finally worked out the bugs. The schematic and parts list contain untold errors. I will help anyone if they send a SASE.

David Hartman
2 Gillis Road
Portsmouth, Virginia 23702

Editor: You might try writing to John Oliger, 11601 Whidbey Drive, Cumberland, IN 46229, for information on the EPROM programmer that he sells in both kit form and a fully assembled version.

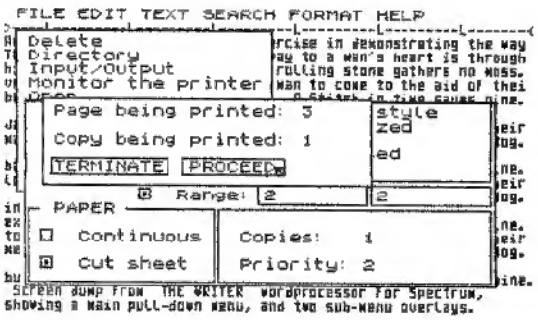
DROP DOWN MENUS

Dear Editor,

Mr. Lemke's article in the March/April '88 issue gives us a very useful facility, and ends with "maybe someday we'll see some 2068 programs using real drop-down menus". This only reinforces my long-held contention that the current level of 2068 programming sadly lacks sophistication compared to that for the Spectrum.

The WRITER (see the accompanying screen dump) has superb windowing facilities (6 main menus, 10 sub-menus) to match those "newer, bigger" computers, and has been available for at least two years, as has the ART STUDIO, to name but two. Surely we have some 2068 programmers who can produce something like this, or have they all gone over to those "newer, bigger" machines?

Bill Rutter
Burnaby, British Columbia
Canada



Screen dump from THE WRITER wordprocessor for Spectrum, showing a main pull-down menu, and two sub-menu overlays.

Editor: Your point is well taken. I would be interested in compiling a list of companies in Great Britain that are reliable to deal with, and handle foreign orders. Does anyone have a favorite Spectrum software or hardware dealer?

TS2068 GRAPHICS

Here is a short graphics program called "windows" submitted by Eric J. Kongs, Wilmington, California. Try it out on your TS2068 to see the special effect.

Using the Graphics Mode and the Symbol Shift (s) key the graphics of a$ can be entered as follows:

```
a$(1)="(s)4,3,3,7"
a$(2)="(s)5,space,space,5"
a$(3)="(s)5,space,space,5"
a$(4)="(s)1,(s)3,(s)3,(s)2"
```

```
 1 REM "WINDOWS"
10 GOSUB 200
20 LET q=FN r(29):LET t=FN r(19)
30 LET i=FN r(7):LET p=FN r(8)
40 IF i=p THEN GOTO 30
50 FOR n=0 TO 3
55 REM try BEEP .03,q here
60 PRINT INK i; PAPER p;AT t+n,q;a$(n+1)
70 NEXT n
80 IF INKEY$="s" THEN STOP
90 IF INKEY$="c" THEN CLS
100 GOTO 20
200 RANDOMIZE:BORDER 0:INK 0:PAPER 7:CLS
210 DEF FN r(x)=INT (RND*x)
220 DIM a$(4,4)
230 LET a$(1)=CHR$139+CHR$131+CHR$131+CHR$135
240 LET a$(2)=CHR$138+CHR$32+CHR$32+CHR$133
250 LET a$(3)=CHR$138+CHR$32+CHR$32+CHR$133
260 LET a$(4)=CHR$142+CHR$140+CHR$140+CHR$141
270 RETURN
```

PRIME FACTORS

The following short listing was sent in by Ron Ruegg of Prairieville, Louisiana. "PRIME FACTORS" will be of interest to those who like solving puzzles (lines 10-45). It should be self-explanatory, but lines 1010-1020 have been included to illustrate a simple way of using it.

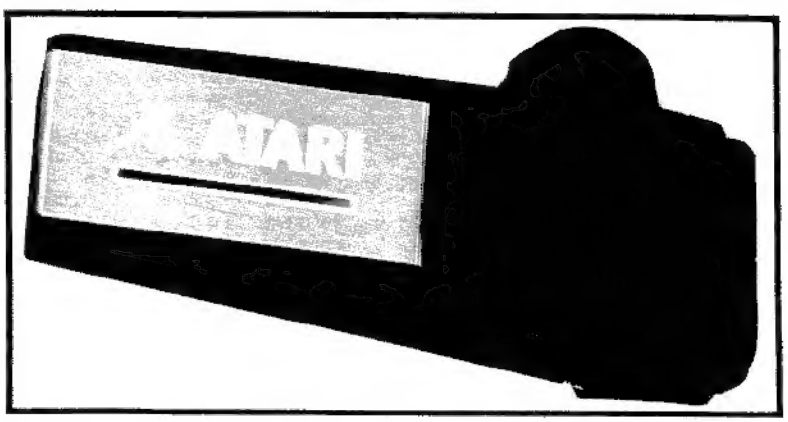
```
  10 REM Prime Factors/RRRuegg
  11 REM Enter with G=Given #
         Positive Integer)= E
  12 REM Exit with N Factors in
         ascending order in F(N)
  13 REM Uses H,H(),I
  14 IF G<2 OR INT G<>G THEN LET
G=0: RETURN
  16 LET N=0: LET H=2
  18 LET N=N+1: LET H=2*H
  20 IF H<G+1 THEN GO TO 18
  22 DIM H(N): LET H(1)=1
  24 LET N=0: LET H=3
  26 LET N=N+1
  28 IF INT (G/2)=G/2 THEN LET H
(N)=2: LET G=G/2: GO TO 26
  30 IF H>G THEN GO TO 36
  32 IF INT (G/H)=G/H THEN LET H
(N)=H: LET G=G/H: LET N=N+1: GO
TO 32
  34 LET H=H+2: GO TO 30
  36 LET N=N-1: DIM F(N)
  38 FOR I=1 TO N
  40 LET G=G*H(I): LET F(I)=H(I)
  42 NEXT I
  44 DIM H(1): RETURN
  45 REM G same as at entry
1010 CLS : INPUT G
1015 GO SUB 10
1020 FOR I=1 TO N: PRINT F(I): N
EXT I
```

A FASTER JOYSTICK

Dear Tim,

I just found a good joystick for the QL or 2068 which has an excellent reaction time...the Atari Pro-Line model CX24 (about $10). To adapt it to our computers, take it apart (two screws) and slide off the red and yellow wires from the circuit board contact. Put it back together and your in business.

Earl L. Kielgass
Tempe, Arizona



National TS Users Group Directory

User Group Information Key

a) USER GROUP'S OFFICIAL NAME
b) MAILING ADDRESS
c) PERSON TO CONTACT
d) PHONE NUMBER OF ABOVE PERSON (if available)
e) CURRENT MEETING PLACE
f) FREQUENCY OF MEETINGS
g) CURRENT NUMBER OF ACTIVE MEMBERS
h) CURRENT GROUP OFFICERS
i) YEAR GROUP WAS FORMED
j) OFFICIAL NON-PROFIT STATUS
k) NAME OF REGULARLY PUBLISHED NEWSLETTER
l) FREQUENCY OF PUBLICATION
m) CURRENT NEWSLETTER EDITOR
n) ARE NON-MEMBER SUBSCRIPTIONS ACCEPTED (and the annual cost)
o) WHAT COMPUTER MODELS ARE REPRESENTED IN YOUR GROUP (see key)
p) IS THERE A GROUP LIBRARY FOR MEMBERS
q) PARTICIPATES IN PUBLIC DOMAIN SOFTWARE SWAP PROGRAM
r) SPECIAL PROJECT(S) GROUP IS CURRENTLY WORKING ON

Computer Model Key

1. TS1000/ZX81
2. TS2068
3. QL
4. ZX SPECTRUM
5. TS1500
6. Z88
7. IBM/CLONE
8. PC-8300
9. ZX80
10. Other Brands

ARIZONA

a) 1st Sinclair Users Group of Phoenix
b) 8157 McLellan Rd.
Glendale, Arizona 85303
c) 1. Tony Toccora (address above)
2. Moosa Marafi (phone number below)
d) (602) 246-8061
e) Yucca Branch-Public Library
f) 1st and 3rd Saturday of each month
g) 10
h) President: Tony Toccora
Vice President: Moosa Marafi
Treasurer: Tony Toccora
Librarian: Fred Carrick
i) 1982
j) yes
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q)
r)

CALIFORNIA

a) Timex Sinclair Special Interest Group (SIG)
of the San Diego Computer Society
b) 8155 Jamacha Rd.
San Diego, California 92114
c) Tim Edwards
d) (619) 462-3724
e) North Park Recreational Center
f) 1st Thursday of each month
g) 15
h) Coordinator: Tim Edwards
i) 1982
j) yes
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 9
p) yes
q)
r)

a) Peninsula Users Group
b) PO Box 1312
Pacifica, California 94044
c) George Hockridge
d) (415) 878-1773
e) Peninsula Hospital, Burlingame, California
f) 3rd Sunday of each month
g) 50
h) President: George Hockridge
Chairman: Norm Lehfeldt
Chairman: Jack Dohaney
i) 1983
j)
k) "TIMELINEZ"
l) monthly
m) Andy Hradesky
n) yes, $15/year
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q) yes, write for details
r) Sinclair survival

a) Sacramento Timex Sinclair User Group
b) 312 B Street
Roseville, California 95678
c) Jim Griffis
d) (916) 783-0919
e) write or call for details
f) write or call for details
g) 8
h) Chairman: Jim Griffis
i) 1983
j)
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 9
p) yes
q)
r)

a) GUTS/SV (Timex Sinclair Silicon Valley Users)
b) 6675 Clifford Dr.
Cupertino, California 95014
c) Bill Miller
d) (408) 253-3175
e) Cupertino Public Library
f) last Wednesday of each month
g) 32
h) Information Coordinator: Bill Miller
i) 1982
j)
k) "TIMELINEZ/SincLink"
l) write or call for details
m) Andy Hradesky
n) subscribers become GUTS/SV members, $15/year
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q) yes, via the LogOn BBS, write or call for details
r) transcribing group info files on standard media/format

a) West Los Angeles ZX Users Group
b) PO Box 34545
Los Angeles, California 90034
c) Dr. George Kuby
d) (213) 551-9454, after 3pm
e) The Westside Pavilion, West Los Angeles, California
f) semi-monthly
g) 200
h)
i) 1978
j)
k) ZX Computer Users Group newsletter
l) semi-monthly
m) George Kuby
n)
o) 1, 2, 3, 4, 5, 7, 8, 9, 10
p) yes
q)
r)

a) South Bay Computer Club
b) 2318 Walnut Ave
Manhattan Beach, California 90266
c) John W. Petersen
d) (213) 545-9581
e) club currently meets with the West LA ZX Users Group (see listing above). Write or call for further details.

COLORADO

a) Mile High Timex Sinclair User Group
b) 801 S. Grant St.
Denver, Colorado 80209
c) Kurt Carlson
d) (303) 733-4391
e) call or write for details
f) monthly
g) 12
h)
i) 1982
j)
k) "Mile High TS Group Newsletter"
l) monthly
m) Kurt Carlson
n) yes, $10/year
o) 1, 2, 3
p) yes
q) yes (write for details)
r) ZX81 control of a model sailboat

CONNECTICUT

a) Greater New Haven Timex Sinclair User Group
b) 256 Lloyd St.
New Haven, Connecticut 06513
c) Dennis N. Silvestri
d)
e) write for details
f) monthly
g) 4 (note: newly formed group)
h)
i) 1988
j)
k)
l)
m)
n)
o) 1, 2, 3, 6
p) yes
q)
r) trying to find and meet with other Timex Sinclair users in the New Haven area

FLORIDA

a) Northeast Florida Timex/Sinclair Users Group
b) 2942 Christopher Road
Jacksonville, Florida 32217
c) Tom Phillips
d)
e) Regency Branch Library
f) 2nd and 4th Saturday of each month, 10am-1pm
g) 32
h) President: Steve Berg
Secretary: John Kuhn
Treasurer: Bill Fisher
Newsletter Exchange: Tom Phillips
Librarian: Norm Petrik
i) 1982
j)
k) "The Sinc Times"
l) bi-monthly
m) Steve Berg
n) yes, $8/year
o) 1, 2, 3, 5, 8, 9
p) yes
q)
r) just finished TS Winterfest

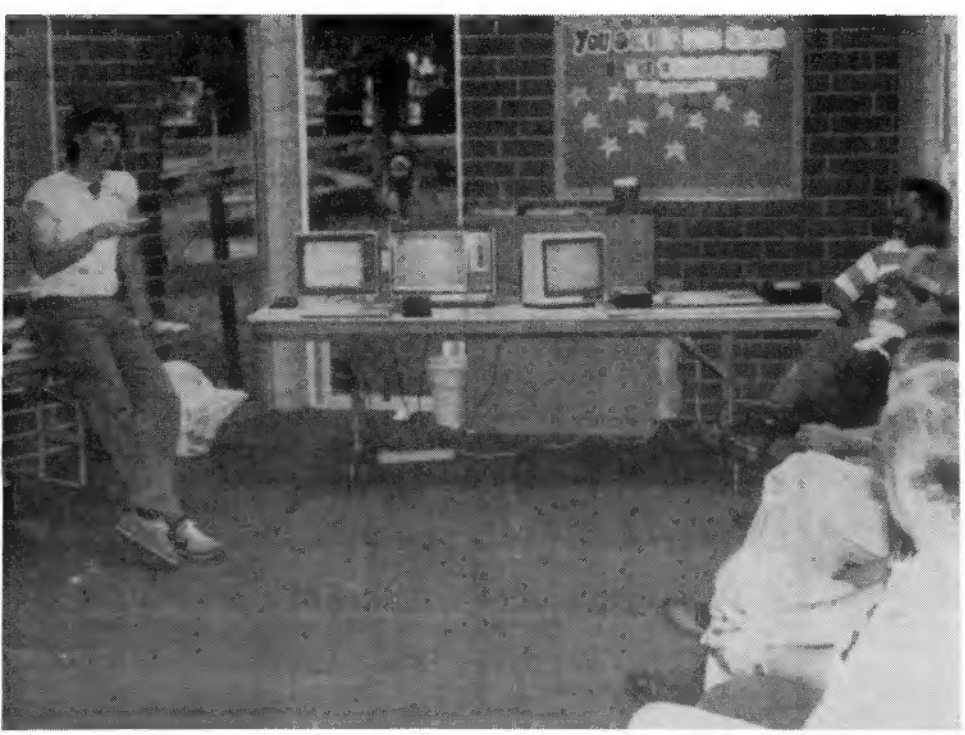
a) Sun Lake User Group
b) 342 Trotter Court
Sanford, Florida 32773
c) Hunson H. Cockayne
d)
e) Sunlake Estates Clubhouse, Grand Island, Florida
f) 3rd Thursday of each month
g) 10
h) Director: Hunson Cockayne
Secretary: Robert Cockayne
i) 1986
j)
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q)
r)

a) Gainesville Sinclair Group
b) 508 N.W 35 Terrace
Gainesville, Florida 32607
c) Rob Martin
d) (904) 371-2333
e) Unitarian Universalist Fellowship (Millhopper Area)
f) 2nd Monday of each month, 7:30pm
g) 10
h)
i) 1988 (reformation of former Gainesville TS group)
j)
k)
l)
m)
n)
o) 2, 3
p) yes
q) yes, on local BBS, write or call for details
r)

a) Northwest Florida 2068 Timex Sinclair User Group
b) 402 Pine Terrace Circle
Milton, Florida 32570
c) Ed Salter
d) (904) 623-8178
(904) 994-5311
e) write or call for details
f) write or call for details
g) 5
h) President: Ed Salter
i) 1986
j) yes
k)
l)
m)
n)
o) 1, 2, 10
p)
q)
r) transferring programs on tape to disk (Aerco)

a) Timex/Sinclair Computer Club of Central Florida
b) 5020 North Lane #24
Orlando, Florida 32808
c) Darrell Stec
d) (407) 298-7412
e) write or call for details
f) 2nd and 4th Sunday or each month
g) 15
h) Presidents: Darrell Stec & Dan Wolf
Vice-President: Niel Cohen
i) 1983
j)
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q) yes, write for details
r) 1. setting up a group BBS
2. QL control of automated equipment

a) St. Petersburg Chapter of TAS BAM
b) 5958 46 Ave N.
St. Petersburg, Florida 33709
c) George Fetherman
d) (813) 548-4278
e) Beach Federal Savings & Loan, Seminole, Florida
f) 2nd Saturday of each month
g) 10
h) Chairman: George Fetherman
i) 1982
j) yes
k)
l)
m)
n)
o) 1, 2, 3
p)
q)
r) modifying 2068 disk drive systems



GEORGIA

a) Atlanta Timex Users Group
b) 229 Ponce de Leon Ave #16
Atlanta, Georgia 30308
c) Bret Lanius
d) (404) 875-8048
e) write or call for details
f) monthly
g) 12
h) President: Bret Lanius
Secretary: Laurie Futrell
i) 1983
j)
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q)
r)

ILLINOIS

a) Chicago Area Timex Users Group
b) 1885A Yorktown Ave.
Great Lakes, Illinois 60088
c) Gary Lessenberry
d) (312) 473-9415
e) Downers Grove Public Library
f) third Saturday of each month
g) 25
h) TS2068 Coordinator: Gary Lessenberry
QL Coordinator: Butch Weinberg
Meetings Coordinator: Steve Cooper
Treasurer: Paul Beatty
i) 1988
j) yes
k) "The Nite-Times News"
l) monthly
m) Gary Lessenberry
n) yes, $8/year
o) 1, 2, 3, 8
p) yes
q) yes, write for details
r)

INDIANA

a) Indiana Sinclair-Timex Users Group
b) 513 East Main
Peru, Indiana 46970
c) Frank Davis
d) (317) 473-8031
e) Eagledale Public Library, Indianapolis
f) monthly
g) 46
h) President: Frank Davis
Vice-President: Paul Holmgren
Secretary: Willie Jones
Treasurer: Carol Davis
i) 1988
j) applied for
k) "I.S.T.U.G. Newsletter"
l) 11 issues a year minimum
m) Frank Davis (substitute: Mike Felerski)
n) yes, $7.50/year
o) 1, 2, 3, 4, 5, 8
p) yes
q) yes, write for details
r)

IOWA

a) GRACIST(Cedar Rapids And Greater Iowa Sinclair Timex)
b) 3310 Clover Drive S.W.
Cedar Rapids, Iowa 52404
c) Donald S. Lambert
d) (319) 364-4330
e) write or call for details
f) monthly during December thru May
g) 5
h)
i) 1986
j)
k)
l)
m)
n)
o) 1, 2, 5, 8, 9
p)
q)
r) computer controlled camera on a kite

a) Omaha/Council Bluffs Area Timex Sinclair Group
b) 3700 Twin City Dr
Council Bluffs, Iowa 51501
c) Jerry Ebsen
d) (712) 366-9569
e) call or write for details
f) monthly
g) 8
h) Coordinator: Jerry Ebsen
i) 1985
j)
k)
l)
m)
n)
o) 1, 2, 5
p) yes
q) yes, write for details
r) converting software to disk drive (Aerco)

KANSAS

a) Kansas Area Timex/Sinclair Users Group
b) PO Box 17579
Wichita, Kansas 67217
c) Paul Reynolds
d) (316) 529-2575
e) Sedwick County Courthouse, 9th Floor
f) 2nd and 4th Tuesday of the month
g) 25
h) President: Paul D. Reynolds
Vice-President: Randy Cummings
Treasurer: Paul D. Reynolds
i) 1981
j)
k) "KATS KOMPUTER KNEWS"
l) monthly
m) Ken Cummings (Assistant Editor: Matt Kiddoo)
n) yes, $5/year
o) 1, 2, 4, 5, 9
p) yes
q)
r) BBS with online software library

a) Sinclair Users of Kansas City
b) 237 Mellott
Edwardsville, Kansas 66113
c) Phil Roberts
d) (913) 441-1240
e) Plaza Library, Kansas City, Missouri
f) 3rd Saturday of the month, 1-4 pm
g) 10
h) President: Phil Roberts
Secretary: Asie Nahone
Treasurer: Larry South
i) 1982
j)
k)
l)
m)
n)
o) 1, 2, 3, 4, 8
p) yes
q)
r)

KENTUCKY

a) Sinclair Louisville User Group
b) 1434 Goddard Ave
Louisville, KY 40204
c) Jim Pitts
d) (502) 459-5804
e) Central Government Center, outer-loop
f) 2nd Wednesday of each month, 7:30pm
g) 12
h) President: Jim Pitts
Secretary: Bob Crecco
Treasurer: John Hamilton
Public Affairs: Ray Hanley
Newsletter Exchange: Jim Dodrill
i) 1984
j)
k) "SLUG Newsletter"
l) monthly
m) Shawn Herrick
n) yes, $10/year
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q) yes, write for details
r) converting 2050 modems to RS232

2 NEW RELEASES FROM
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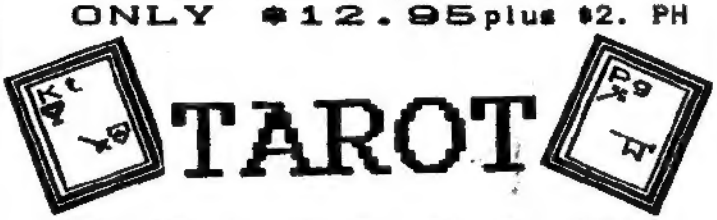

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RMG ENTERPRISES

1419 1/2 7TH STREET
OREGON CITY, OR 97045

MARYLAND

a) Westinghouse Timex/Sinclair Users Group
b) Jack Fogarty 3841
   Westinghouse
   PO Box 748
   Baltimore, Maryland 21203
c) Jack Fogarty
d) work: (301) 765-7116
e) write or call for details
f)
g) 12
h)
i) 1982
j)
k)
l)
m)
n)
o) 1, 2, 9
p) yes
q)
r)

MASSACHUSETTS

a) Sinclair/Timex User Group of the Boston Computer Society
b) 1 Center Plaza
   Boston, Massachusetts 02108
c) Peter Hale
d) (617) 868-0830
e) write or call for details
f) monthly
g) 180
h) President: John Kemeny
   Vice-President: Peter Hale
   Librarian: Jim Rodlin
i) 1981
j) yes
k) "Sinclair Timex Newsletter"
l) bi-monthly
m) Peter Hale
n) yes, $20/year
o) 1, 2, 3, 5
p) yes
q)
r) upgrading "Timewarp" BBS to 1200 Baud
   (phone 617-481-0555, settings 8/1/N, Sysop
   is Jim Rodlin)

MICHIGAN

a) SMUG
b) PO Box 313
   Mason, Michigan 48854
c) Bob Dodge
d) (517) 589-5542
e) Mason/Leslie area, write or call for details
f) write or call for details
g) 15
h) President: Robert L. Dodge
   Vice-President: Timothy Glynn
   Secretary: Alberta S. Joy
   Treasurer: Robert Aaron
i) 1982
j) yes
k) "T/S NEWS"
l) quarterly
m) Robert Aaron
n) yes, $10/year
o) 1, 2, 3, 4
p) yes
q)
r) master wargame, with moves controlled via modem

a) SEMCO (Sinclair Special Interest Group)
b) PO Box 814
   Warren, Michigan 48090
c) Barry Carter
d)
e) write for details
f) 2nd Sunday of each month
g) 8
h) Chairman: Barry Carter
i) 1980
j) yes
k) "Detroit Area Timex/Sinclair News"
l) bi-monthly
m) Barry Carter
n) yes, $10/year
o) 1, 2, 3, 7, 8, 10
p) yes
q)
r) 1. CP/M programming
   2. Graphics conversions from IBM

a) Tri-City Timex Sinclair User Group
b) 708 S. Mason
   Saginaw, Michigan 48602
c) Mike Davis
d) (517) 791-1088
e) write or call for details
f) bi-monthly
g) 20
h) Chairman: Mike Davis
   Co-Chairman: Duane Malburg
i) 1982
j)
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q) yes, write for details
r) software for the handicap

NEVADA

a) The Hackers
b) 2345 Moorpark Way
   Henderson, Nevada 89014
c) Steve Sawchuk
d) (702) 451-8678
e) Nevada Power Company, Las Vegas, Nevada
f) 3rd Saturday of each month
g) 17
h) Board of Directors: Chris Fenn
   Ralph Hammer
   Sven Nilsson
   Steve Sawchuk
i) 1984
j) yes
k) "the HACKER"
l) monthly
m) Steve Sawchuk
n) yes, $12/year
o) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
p) yes
q)
r)

NEW MEXICO

a) Timex Sinclair Amateur Radio Users Group (TSARUG)
b) 2025 O'Donnell
   Las Cruces, New Mexico 88001
c) Alex F. Burr, K5XY
d) (505) 522-2528
   (505) 648-3808
e)
f)
g) 200
h)
i) 1981
j)
k) "QZX"
l) monthly
m) Alex F. Burr
n) yes, $15/year
o) 1, 2, 3, 5, 9
p)
q) yes, write for details
r)

NEW YORK

a) Sinclair User Group of West New York
b) 188 St. Felix Ave.
Cheektowaga, New York 14227
c) Richard K. Norek
d) (718) 892-1922
e) call or write for details
f) 1st Tuesday of the month
g) 20
h) Moderator: Richard Norek
i) 1984
j) yes
k)
l)
m)
n)
o) 1, 2, 3, 4, 5, 8, 8
p) yes
q)
r)

a) Sinclair Computer Users Society (SINCUS)
b) 1229 Rhodes Road
Johnson City, New York 13790
c) Paul Hill
d) (607) 798-7219
e) Vestal Public Library, Vestal, New York
f) monthly, write or call for details
g) 18 local, 46 corresponding members
h) President: Clyde Tackley
Vice-President: Dave Schoenwetter
Secretary: Paul Hill
Treasurer: George Penney
i) 1982
j)
k) "SINCUS NEWS"
l) bi-monthly
m) Paul Hill
n) subscription included with membership, $8/year
o) 1, 2, 3
p) yes
q) yes, write for details
r)

a) LIST (Long Island Sinclair Timex)
b) 5 Peri Lane
Valley Stream, New York 11581
c) Harvey Rait
d) (516) 791-8247
e) call or write for information
f) monthly (usually 2nd Sunday of the month)
g) 70
h) President: Miles Cohen
Secretary: Harvey Rait
Treasurer: Robert Malloy
i) 1982
j)
k) "LISTing"
l) monthly
m) Joe Newman
n) subscription included with membership, $15/year
o) 1, 2, 3, 4
p) yes
q) yes, write for details
r)

NORTH CAROLINA

a) Triangle Computer Society
b) PO Box 3588
Chapel Hill, North Carolina 27515
c) for Timex/Sinclair info: Doug Dewey
208 James St.
Carrboro, NC 27510
d) (919) 929-3079
e) call or write for details
f) monthly
g)
h) President of TCS: Bill Hutchins
i)
j) state chartered
k)
l)
m)
n)
o) 2, 3, 4, 7, 10
p) yes

OHIO

a) Dayton Area Timex/Sinclair Users Group of DMA, Inc.
b) 812 Hedwick St.
New Carlisle, Ohio 45344
c) Gary M. Ganger
d) (513) 849-1483
e) Dayton Museum Of Natural History, Dayton, Ohio
f) Third Tuesday of each month, 7-9pm
g) 10
h) Chairman: Gary M. Ganger
Instructor: Dr. Len Spialter
i) 1983 for T/S Users Group which is a SIG of
the Dayton Microcomputer Association, Inc.
(founded 1975)
j) state chartered
k) "The DATA BUS"
l) monthly
m) John R. Hargreaves
n) subscription included with DMA membership, $12/year
o) 1, 2, 3, 5, 8, 9
p) yes
q)
r) QL & TS2068 networking to be demoed at the 13th
Annual Computerfest™ 86 (largest multi-computer
show in the midwest)

a) Yet Another Orphan User Group (YAOUG)
b) 650 N Drexel
Columbus, Ohio 43219
c) Dave Zimmerman
d) (814) 253-7408
e) call or write for details
f) 2nd Tuesday of the month
g) 20
h) President: Dave Zimmerman
Vice-President: Mowgli Assor
i) 1982 (formerally ATSU)
j)
k) "The YAOUG Newsletter"
l) bi-monthly
m) Mowgli Assor
n) yes, $6/year
o) 2, 3, 7, 10
p) yes
q)
r)

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a) Greater Cleveland Sinclair Users Group
b) 6514 Bradley Ave (down)
Parma, Ohio, 44129
c) Andy Kosiorek
d)
e) East & West side Cleveland locations (write for details)
f) twice a month
g) 120
h) President: Andy Kosiorek
Vice President: Gene Wilson
Secretary: Tom Simon
Treasurer: Robert Parish
Mailing List Manager: Doug Gillespie
i) 1983
j)
k) "THE RAMTOP"
l) bi-monthly
m) James G. DuPuy
n) yes, $15/year
o) 1, 2, 3
p) yes
q) yes (write for details)
r) Mid-West TS Conference, Aug.27, 28, 1988 (Sat.,Sun.)

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the user's NEWS

A Quarterly Magazine for the users

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TS 2068 UP DATE is a quarterly publication devoted to the support of users of the Timex TS-2068. Each of the Disk Drive Systems for the TS-2068 are discussed in detail in special feature sections. Annual subscription is $12.00 per year of issues.

OREGON

a) Clackamas County Area Timex Sinclair Users Group
b) 1418 1/2 7th Street
Oregon City, Oregon 97045
c) Rod Gowen
d) (503) 655-7464, Tues.-Sat., 12 noon-10pm
e) Farwest Federal Savings & Loan, Oregon City
f) monthly (call or write for details)
g) 32
h) President: Michael E. Carver
Vice-President: Bill Dunlop
Secretary: Jack Armstrong
Treasurer: Rod Gowen
Librarian: Gaylen Bench
i) 1981
j)
k) "THE PLOTTER"
l) 11 times a year
m) Dick Wagner
n) yes, $12/year
o) 1, 2, 3, 4, 5, 6, 7, 9, 10
p) yes
q) yes (write for details)
r) 3rd Annual Int./NW TS Mini-Fair, August 6,7, 1988

PENNSYLVANIA

a) WCUC Timex Sinclair Special Interest Group (SIG)
b) PO Box 3051
Greensburg, Pennsylvania 15601
c) Judy Muir
d) (412) 379-8762
e) Westmoreland Community College, Youngswood, PA
f) monthly
g) 8
h) President: Judy Muir
Vice President: Ralph Vasko
i) 1988
j)
k) regular column in WCBC "User Amuser"
l) monthly
m)
n)
o) 1, 2, 3, 5, 8, 9
p) yes
q)
r)

a) PACC Timex/Sinclair Special Interest Group (SIG)
b) 2403 Jenny Lind St.
McKeesport, Pennsylvania 15132
c) Tom Heatherington
d) (412) 672-4211
e) Allegheny Community College, Pittsburgh, PA
f) monthly
g) 15
h) President: Tom Heatherington
Vice-President (TS2068): Joe Siciliano
Vice-President (TS1000): Judy Muir
Secretary: Ralph Vasko
Treasurer: Chuck Culbertson
i) 1980
j)
k) regular column in "PACC TALK"
l) monthly
m)
n)
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q)
r)

a) Harrisburg Area Timex Sinclair Users Group
b) 329 Rear Walton St.
Lemoyne, Pennsylvania 17043
c) David Bennett
d) (717) 774-7531
e) Camp Hill Mall-community room
f) monthly
g) 15
h) President: David Bennett
i) 1986
j)
k) "H.A.T.S:"
l) monthly
m) David Bennett
n) yes, $10/year
o) 1, 2, 3, 4, 5, 6, 8, 9
p) yes

TEXAS

a) Dallas Timex/Sinclair/Amstrad Users Group
b) PO Box 153421
Irving, Texas 75015
c) George Edmonds
d) (214) 252-5822
e) INFOMART, Dallas, Texas
f) monthly, write or call for details
g) 27
h) President: Glynn Harris
Vice-President: George Edmonds
Sec./Treas: Arthur J. Emerson
Newsletter Exchange: George Edmonds
i) 1982
j)
k)
l)
m)
n)
o) 1, 2, 7, 8, 10
p) yes
q)
r)

a) Amarillo Timex Sinclair Users Group
b) 3100 Mockingbird
Amarillo, Texas 79109
c) Joe Jenkins
d) (806) 355-3185
e) write or call for details
f) write or call for details
g) 8
h) President: Joe Jenkins
i) 1984
j)
k)
l)
m)
n)
o) 1, 2, 3, 5
p) [redacted]
q)
r)

a) Timex/Sinclair Users Group Of Fort Worth
b) 4424 Geddes Ave
Fort Worth, Texas 76107
c) David Bauloh
d) (817) 731-6215
e) Fort Worth Public Library
f) 2nd Saturday of each month, 1-4pm
g) 20
h) President: Chuck Dawson
Vice-President: Frank Bouldin
Secretary: Fred Stockton
Treasurer: Ellis Saunders
i) 1984
j)
k) "THE DATA EXPANSION"
l) monthly
m) David Bauloh
n) yes, $12/six issues or $24/year
o) 1, 2, 5, 7, 8, 9
p) [redacted]
q) yes, write or call for details
r)

VIRGINA

a) Southern Virginia Timex Sinclair Users Network
b) Route 1, Box 21
Glade Hill, Virginia 24092
c) Gary Preston
d) (703) 576-2390
e) write or call for details
f) write or call for details
g) 6
h) Chairman: Gary Preston
i) 1982
j)
k)
l)
m)
n)
o) 1, 2, 4, 5, 9
p) yes

a) Capital Area Timex Sinclair Users Group
b) PO Box 487
Fairfax Station, Virginia 22039
c) Vernon R. Smith
d) (703) 978-1835
e) New Carrollton Library, New Carrollton, Maryland
f) 2nd Saturday of each month
g) 66
h) President: Tom Bent
1st Vice-President: Hank Dickson
2nd Vice-President: George Rey
Secretary: Mike Warnick
Treasurer: Ruth Fegley
Members At Large: Mark Fisher
Bill Barnhart
Bob Curnutt
i) 1982
j)
k) "The CATS Newsletter"
l) monthly
m) Vernon R. Smith
n) yes, $12/year
o) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
p) yes
q)
r) 1. providing comprehensive QL modification instructions
2. video tape library of various meeting presentations

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ADVANCED USER'S GUIDE
FOR THE FD-68 DISK I/F

As we see it, it would be a definitive guide to the AERCO DOS AERCO never gave you. It would include many examples of how to implement the commands, eg.:SAVE, LOAD and MERGE. It would show how to SAVE arrays/data and how to use the extra 64K of RAM that AERCO forgot to explain to you! There would be a complete appendix and all items would be cross- referenced. We also anticipate including a section on the AERCO/ LKDOS cartridge and its operating system and commands.

What we NEED to know is:
1> WOULD THIS BE OF INTEREST TO YOU?
2> WHAT WOULD IT BE WORTH TO YOU?
3> WOULD YOU PAY $14.95 FOR IT?

PLEASE-If you would like to see such a volume put together, let us know! Drop a line or call for more info. If enough interest is shown, IT WILL BE DONE! The writer is a VERY well-known writer of software and TS articles. You won't be disappointed!

RMG ENTERPRISES
1419 1/2 7TH STREET
OREGON CITY, OR 97045 (503)655-7484

a) Hampton Roads Timex Sinclair Users Group
b) 112 Kohler Cresent
Newport News, Virginia 23606
c) David Alford
d) (804) 595-4385
e) Denvigh High School
f) monthly (except Summer)
g) 5
h) Chairman: David Alford
i) 1981
j)
k)
l)
m)
n)
o) 1, 2, 3
p) yes

WASHINGTON

a) Seattle Area Timex User Group
b) 10909 N.E. 45th St.
Kirkland, Washington 98033
c) Derryck Turner
d) (206) 827-1283
e) The Good Shepard Center, Seattle, Washington
f) monthly, call or write for details
g) 21
h) President: Derryck Turner
Vice-President: Don Reich
Secretary. Guy Bruno
Treasurer: Dave Battershill
Librarian: Dale Fritz
i) 1984
j)
k) "SWYM"
l) monthly
m) Jim Balazic
n)
o) 1, 2, 3, 4, 5, 8
p) yes
q) yes, write for details
r) TS1000 Static RAM expansion

a) Vashon Island Sinclair Timex Association (VISTA)
b) PO Box 189
Vashon, Washington 98070
c) Tony Willing
d) (206) 567-4118 eves.
e) write or call for details
f) monthly
g) 12
h) President: Tony Willing
Vice President: Tim Ward
i) 1986
j)
k) "VISTA Newsletter"
l) bi-monthly
m) Tony Willing
n) yes, $6/year
o) 1, 5
p) yes
q) yes, write for details

WISCONSIN

a) Sinclair Milwaukee Users Group
b) PO Box 101
Butler, Wisconsin 53007
c) Neal Schultz
d) (414) 353-4522
e) write or call for details
f) 2nd Wednesday of each month
g) 45
h) President: Neal Schultz
Vice President: Bill Heberlein
Secretary: Lloyd Dreger
Treasurer: Judy Frohboese
Director of Education: Dick Cultice
i) 1982
j) [illegible]
k) "SMUG BYTES"
l) monthly
m) Bill Heberlein
n) yes, $10/year
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q)
r) multi-user networking with the QL

LARKEN PRESENTS ...

UP TO 256K RAM for your 2068

- Expand your 2068 with up to 256K of battery backed up Ram
- Larken Operating system lets you SAVE to memory, just like cassette or disk. (Floppy disk not required)
- All Cassette commands supported. Very Fast and Reliable .
- Can be used with ALL existing 2068 or Spectrum software.
- Uses the new 32K static ram chips, 62256LP or 43256LP
- System consists of Larken Cartridge and Rear Memory Board.

** PRICE - MEMORY SYSTEM with 64K Ram $129.00
- MEMORY SYSTEM with 0 K ..... $ 95.00

LARKEN 2068 FLOPPY DISK SYSTEM

- The most advanced Dos available for the 2068/Spectrum . LKdos uses ALL Commands such as CAT MERGE ERASE LOAD SAVE PRINT OPEN etc. Also can support RAMDISK up to 256K and Sequential / Random Access Files (with additional software). The Larken Disk Interface can handle up to 4 floppys for up to 3.2 MegaBytes of storage. Also NMI Snapshot Save Button and KEMPSTON Joystick port on interface Also 10 Extended Basic commands for Windows and Graphics.

AERCO RAMEX or OLIGER Disk users can add LKdos for more commands, Ramdisk and access to all LKdos software

** PRICE - Larken Floppy Disk System $119.95
- Floppy Disk IF with 0 K Memory board .. $169.95
- Larken Disk Editor ..... $ 15.00
- Sequential/Random access files ..... $ 15.00
- Xmodem to Disk Modem package ..... $ 15.00
- ZX-81 Floppy Interface (15 left) ... $ 99.95
- LKDOS for Aerco,Ramex or Oliger Disk IF [illegible]

(All prices are US , Add 6$ Shipping)

LARKEN ELECTRONICS RR#2 NAVAN ONTARIO CANADA K4B-1H9
(613)-835-2680 .

NOW! AFFORDABLE

2068/1520

HI-RES PLOTTING

WHAT IS A 1520? - The 1520 is a HI-RES four color printer/plotter made for Commodore computers capable of printing rotatable characters in 4 different sizes and able to plot lines (solid or dashed) within a 480 by 1,996 step (0.2 mm/step) plotting area. Replacement pens & paper are low priced & can be found at most RADIO SHACK stores.

HOW AFFORDABLE? - The 1520 can be found at some TOYS-R-US stores & I have a few recond. units 4-sale. I/F hdware sells for $14.95 (barebd), $20.95 (compl. kit), & $30.95 (assem./tested). All orders are shipped ppd.

SOFTWARE? - Currently, there are utilities for interactive and auto transfer of SCREEN$ to the 1520, for making banners & calendars, plotting demos incl. fractals, & a patch kit allowing CMScript V5/5.2 files to be printed and/or plotted on the 1520. The software is priced @ $8.95 (post paid) each and comes with complete user notes.

USER FRIENDLY? YES!! - All print/plot directives are sent via BASIC "LPRINT" statements. PLOT & DRAW commands in existing BASIC programs can easily be replaced with corresponding "LPRINT" plotter equivalents.

====> See TIME DESIGNS 4/2 & S.W.N. 5/4 for reviews. <====
Send LSASE for more info./order form and a sample plot to:

♦♦♦ John McMichael ♦♦♦
♦♦♦ 1710 Palmer Drive ♦♦♦
♦♦♦ Laramie, WY 82070 ♦♦♦

CANADA

a) Vancouver Sinclair Users Group
b) 2006 Highview Place
Port Moody, British Columbia
Canada V3H 1N5
c) Rod Humphreys
d)
e) Killarny Community Centre, Vancouver, B.C.
f) 2nd Friday of each month
g) 58
h) President: Gerd Breunung
Vice-President: Glenn Read
Secretary: Harvey Taylor
Treasurer: Rod Humphreys
i) 1982
j)
k) "ZX-APPEAL"
l) monthly
m) Rod Humphreys
n) membership in VSUG includes subscription, $15/year
o) 1, 2, 3, 4, 5, 8, 9
p) yes
q)
r) 256K Ramdisk for ZX81/TS1000

a) Toronto Timex-Sinclair Users Club
b) PO Box 7274 Station A
Toronto, Ontario
Canada M5W 1X8
c) George Chambers
d) (416) 751-7559
e) Forest Hill Collegiate Institute
f) 1st Wednesday of each month
g) 70
h) President: Ed Maybee
Vice-President: Jeff Taylor
Secretary: George Chambers
Treasurer: Bill Lawson
Activities Director: Rene Bruneau
i) [illegible]
j) [illegible]
k) "Sinc-Link"
l) bi-monthly
m) Jeff Taylor
n) yes, $12/year
o) 1, 2, 3, 4, 5, 8, 9
p) [illegible]
q) yes, write or call for details
r)

a) Waterloo/Wellington Timex Sinclair Users Group
b) 22 Ardoch Mews
Cambridge, Ontario
Canada N1R 7PZ
c) Brett Lidstone
d) (519) 622-1785
e) Waterloo, Ontario - write for details
f) 2nd Friday of each month
g) 25
h) Coordinator: Brett Lidstone
i) 1982
j) yes
k)
l)
m)
n)
o) 1, 2, 3
p) yes
q) yes, write for details
r) 1. QL memory expansion
2. ZX81 hardware modifications

a) (Ottawa-Hull) Timex-Sinclair User Group
b) 1545 Alta Vista Dr., Apt. 1402
Ottawa, Ontario
Canada K1G 3P4
c) David Solly
d) (613) 731-2120
e) N.R.C, 100 Sussex Dr., Ottawa, Ontario
f) 2nd Tuesday of each month (except July/Aug), 7:30pm
g) 30
h) President: Colin Raymond-Jones
Treasurer: Iris ten Holder
Librarian: David Solly
i) 1983
j) yes
k) "Timex-Sinclair User Group Newsletter"
l) irregular
m) Michael Dove
n)
o) 1, 2
p) yes
q)
r)

a) Victoria Sync Association
b) 1165 Briarwood Drive
Cobblehill, British Columbia
Canada V0R 1L0
c) Dave Curry
d) (804) 743-9280
e) write or call for details
f) monthly
g) 10
h) Chairman. Dave Curry
i) 1981
j) yes
k)
l)
m)
n)
o) 1, 2, 3
p) yes

TOP TEN NEWSLETTERS

If you have ever been caught in the uncomfortable position of having to accept the badge of "newsletter editor", then you are fully aware of the hard work involved, no matter what the size or circulation of the publication is. Being a newsletter editor is for the most part a thankless job, and it can really put you in the "hot seat". Expect criticism, late night deadlines and not-so-understanding family members.

When the suggestion was made to pay tribute to user group newsletters, I thought this was a marvelous idea. Thus the following "top ten" listing is our first effort to pay tribute to those hard-working individuals and assistants responsible for producing newsletters month after month.

I sent out an invitation to every North American user group we had an address for, to supply a copy of a recent issue of their newsletter for TDH's "top ten" selection. We had twenty-two entries submitted!

To help in the selection process, I recruited three individuals, not directly connected with TIME DESIGNS, but who are computer users and have at one time or another, edited a club newsletter. I sat in on the "selection committee" meeting to act as an advisor.

The newsletter entries were judged on the basis of content, originality, layout and appearance. All twenty-two entries were very good. In fact as you can plainly see, the committee had a tough time in deciding which place to award some newsletters, especially in the middle to lower placements. There was actually very little difference in the quality of some of these selections. Therefore, what was once supposed to be a "top ten" list has actually turned out to be a "top seventeen" list, with some placement awards having a tie, and even three-way tie in one position. It was even the committee's suggestion to create an "honorable mention" category, which was implemented with six entries on that list.

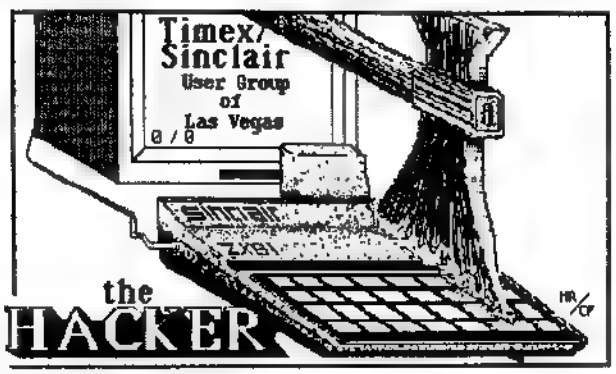
Depending on how well this TOP TEN newsletter selection goes over, we may do it again, and on an annual basis. It was conducted primarily for fun, and our rating should not be taken too seriously. In fact all of the newsletter editors represented here should receive a congratulatory "pat on the back".

Only preliminary information about the group and newsletter is provided. For further information (such as how much a subscription would cost), please refer to the complete user group listing found elsewhere in this issue. If the following newsletters sound interesting to you, by all means...contact the group.

- Tim Woods

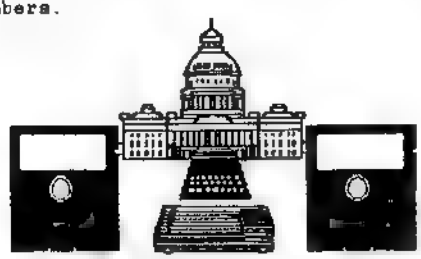
FIRST PLACE:

"The Hacker"
The Hackers (TS Group of Las Vegas, Nevada)
Steve Sawchuk-editor
Dawn Sawchuk-co-editor
Ralph Hanner-program editor
Chris Fenn-art director
May 1988 issue was submitted
Comments: Excellent use of desktop publishing software. Great graphics (see logo example). Clean/professional appearance. Interesting news and editorial content. Even a program listing for the new Z88 laptop computer (how progressive can you get?).



SECOND PLACE (a tie):

1. "CATS Newsletter"
   Capitol Area Timex Sinclair Users Group
   Vernon Smith-editor
   May 1988 issue submitted.
   Comments: Good use of QL desktop publishing software. Easy to read print fonts. Info-packed, interesting content, contributed entirely by group members.



2. "ZX-APPEAL"
   Vancouver (Canada) Sinclair Users Group
   Rod Humphreys-editor
   May 1988 issue submitted.
   Comments: Nice artwork/layout. Interesting group news. Good work from a traditionally forward-moving group. (How can you loose with Harvey Taylor and Fred Nachbaur as contributing group members?!)

THIRD PLACE:

"SINC-LINK"
Toronto (Canada) Timex-Sinclair Users Club
Jeff Taylor-editor
R. Bureau, R. Zannese-assistants
May/June 1988 issue submitted.
Comments: Heavy member participation (original contributions). Loaded with "tasty" Timex tips. Expertise in the area of the Larken Disk Drive System and Ramdisk.

FOURTH PLACE:

"The Ramtop"
Greater Cleveland Sinclair Timex Users Group
James G. DuPuy-editor
March/April 1988 issue submitted.
Comments: Interesting news. Digitized video graphics added a very nice touch. Chris Raynak QL column is a winner (and David Hoshor material too!).

FIFTH PLACE:

"Detroit Area Timex/Sinclair News"
SEMCO (Timex Sinclair Special Interest Group)
Barry Carter-editor
January/February 1988 issue submitted.
Comments: Very Strong on graphics (RLE, digitized, etc.) and telecommunications. Nice use of Front Page (QL desktop publisher). Unique Barry Carter-style editorializing ("sometimes cynical, but most of the time right").

SIXTH PLACE (a three-way tie):

1. "SMUG Bytes"
   Sinclair Milwaukee (Wisconsin) Users Group
   Bill Heberlein-editor
   June 1988 issue submitted.
   Comments: All "in-house" contributions. Excellent disk drive (Oliger) utility by R.A. Hilsmann. There was even three advertisements.

2. "The Plotter"
   Clackamas County Area (Oregon) T/S Users Group
   Dick Wagner-editor
   June 1988 issue submitted.
   Comments: Lots of group news and activity. Good editorials, and original contributions from members

3. "The Data Expansion"
   Fort Worth Timex Sinclair Users Group
   David Baulch-editor
   May 1988 issue submitted.
   Comments: Lots of good information, especially on CP/M. Pretty much a one-man (or one-editor) show. This guy cranks the issues out month after month (how does he do it??). No graphics, but that's CP/M for you.

SEVENTH PLACE (a tie):

1. "Nits-Times News"
   Chicago Area Timex Users Group
   Gary Lessenberry-editor
   May 1988 issue submitted.
   Comments: Good clean production. Plenty of news and editorials. Al Feng is a diversified programmer. Really liked the Timex Sinclair BBS Directory (see it and the group logo reproduced here in this report).

2. "Kats Komputer Knews"
   Kansas Area Timex Sinclair Users Group
   Ken Cummings-editor
   May 1988 issue submitted.
   Comments: Excellent use of Pixel Print TS2068 desktop publisher program (must help having Stan Lemke as a group member, eh?). Every issue has some nifty icon graphics, including a "blow-up" graph showing how they were designed.

CHICAGO AREA TIMEX USERS GROUP

TIMEX/SINCLAIR BBS DIRECTORY

(MAY 1988)

BULLETIN BOARD	NUMBER	NOTES	RATES
T.S.U.G	(201) 956-7703	8 L D @	15/14
YOUR AVERAGE REMOTE BBS	(213) 327-9424	8 L D @	17/15
GREY MATTER BBS	(213) 971-6260	8 M D @	17/15
STARTEXT	(214) 977-1041	8 N $	16/15
FVKUG MBBS	(214) 540-4163	8 D @	16/15
TIMELINES BBS	(216) 671-6922	8 H D $	15/14
CLEVELAND FREE-NET BBS	(216) 368-3888	7 L @	15/14
KINGS MARKET BBS	(303) 665-6091	8 N D @	16/15
NORTH SHORE SINCLAIR BBS	(312) 673-9415	8 L D $ @	-----
ASTRAL PLANE BBS	(312) 476-7765	8 L D @	-----
PEOPLE-LINK	(800) 826-8855	8 L D $	-----
COMPUSERVE	(312) 463-1250	7 H D $	-----
SERIAL PORT BBS	(313) 286-8145	8 H D	15/13
ACCESSLINEBBS	(317) 841-7072	8 H D	14/12
P D S.E.	(415) 571-6911	8 H D @	16/14
R M G BBS	(503) 656-8072	8 H @ $	17/15
JJ'S FIDO	(505) 522-7081	8 L D	17/15
TIMEWARP BBS (PW=GORT)	(515) 282-4169	8 H D	15/13
CITYLINK TOWER	(604) 222-2000	8 H	16/14
NICHOLSON NIGHTIME NETWORK	(604) 354-4666	8 H D	32/27
OWEGO FREE ACADEMY BBS	(607) 754-3420	8 L D	16/15
TCCS (PW=clive")	(607) 785-8372	8 L D	16/15
THE TIMEWARP BBS	(617) 481-0555	7 L D @	16/15
FLEXI BBS	(617) 648-7651	8 L @	16/15
FLASH BBS	(702) 644-6910	8 H D	16/14
NIGHT BYTE BBS	(718) 627-1293	8 L D $	15/14
MICROLINK BBS	(718) 648-3592	8 L D	15/14
THE BUS DEPOT BBS	(904) 252-6751	8 L D	16/15

TIMEX BBS DIRECTORY LEGEND

7	PARAMETERS = 7/E/1	8	PARAMETERS = 8/N/1
D	TIMEX FILE TRANSFERS	L	LOW USAGE T/S MSG BASE
M	MEDIUM USAGE T/S MSG BASE	H	HIGH USAGE T/S MSG BASE
$	SUBSCRIPTION REQUIRED	%	OPERATION DURING EVENINGS
@	ACCESSIBLE VIA PC PURSUIT	?	DOWN UNTIL FURTHER NOTICE

RATES ARE THE CHARGES FROM CHICAGO FOR THE FIRST MINUTE & EACH FOLLOWING MINUTE AFTER 11:00 PM AND ON WEEKENDS

EIGHTH PLACE (a tie):

1. "Sinclair/Timex Newsletter"
   Sinclair/Timex SIG of the Boston Computer Society
   Peter Hale-editor
   May 1988 issue submitted.
   Comments: Good, clean production. Interesting articles...leaning more heavily to the QL. This Sinclair SIG has been around since "day one". It has had some up and downs, but this 1988 edition appears to be more "stream-lined". We look for some good things to come.

2. "Harrisburg Area TS Users Group Newsletter"
   Harrisburg (PA) TS Users Group
   Dave Bennett-editor
   May 1988 issue submitted.
   Comments: Features group news, good member contributions from Douglas Harter and (the late) Cedric Bastiaans.

NINTH PLACE (a tie):

1. "SINCUS NEWS"
   Sinclair Computer Users Society
   Paul Hill-editor
   January/February 1988 issue submitted.
   Comments: It's a joy to see that this institution of Sinclair study is still being published. Paul Hill continues to be a faithful advocate of TS computing. Good member contributions and news. (Our copy was a bit faded...perhaps the SINCUS copy machine needed toner or servicing??)

2. "Indiana Sinclair-Timex Newsletter"
   Indiana Sinclair Timex Users Group
   Frank Davis-editor
   Mike Folerski-co-editor
   April 1988 issue submitted.
   Comments: Good solid newsletter. Lots of Timex "goodies". Even a full classified advertising section.

TENTH PLACE (a tie):

1. "LISTing"
   Long Island (New York) Sinclair Timex Group
   Joe Newman-editor
   April 1988 issue submitted.
   Comments. Good group news. Member contributions appear to be waning, as much of the info was borrowed from other sources. (Excellent report in issue before last on a visit from a former Timex engineer.) Previous LISTing issues have always been a wealth of Sinclair info.

2. "VISTA Newsletter"
   Vashon Island (WA) Sinclair Timex Association
   Tony Willing-editor
   Vol.2 No.3 issue submitted.
   Comments: This newsletter is actually quite a gem. Another one man show. Good news section. Group exclusively uses TS1000/TS1500/ZX81 computers. We've never seen the Gorilla Banana printer work so hard before.

HONORABLE MENTION

1. "QZX"
   Journal of the Sinclair Amateur Radio Club
   Alex Burr-editor
   April 1988 issue submitted.
   Comments: Special interest group newsletter. No Sinclair-equipped ham shack should be without this one! Other non-radio computerists may find the newsletter interesting, since some articles apply just to TS computers. Articles are well written and the reviews are thoughtful.

2. "The SINC TIMES"
   North East Florida TS Users Group
   Steve Berg-editor
   Comments: No issue was submitted for our evaluation. We did however go to the local user group library and dig up a recent copy. Steve Berg puts together an excellent newsletter. All of the contributors are members. Helpful tips on computer languages and telecommunications.

3. "TIMELINEZ"
   Joint newsletter of PUG, SVSTUG (and the defunct EBZUG) user groups from the Bay Area, California.
   Andy Hradesky-editor
   December 1987 issue submitted.
   Comments. Traditionally TIMELINEZ has been one of the best TS group newsletters. However, one hasn't been put out for a while. As we went to press, we

were told that a new issue was being put together. The three groups have much expertise in several different areas (including RLE/GIF graphics, QL programming, 2068 hardware and software, etc.). Accompanying TIMELINEZ is a little insert produced by the SVSTUG group called "SincLink". It is full of news and correspondence received by the group. Bill Miller is the editor. (Hey Bill, what do all those file numbers mean??)

4. "YOUG Newsletter" (formerly the ATSU newsletter)
YOUG, Columbus, Ohio
Mowgli Assor-editor
June 1987 issue submitted.
Comments: While the transformation of ATSU into YOUG takes place, the group sent a back issue of the ATSU newsletter for examination. Mowgli Assor does a capable job of putting together a good newsletter, and writing an article on 2068 graphics. Nice layout. The "unicorn" RLE on the cover was a classy touch We look forward to seeing a copy of the YOUG newsletter when it is available.

5. "The DATA BUS"
Timex Sinclair SIG of the DMA (Ohio)
John Hargreaves-managing editor
Gary M. Ganger-Sinclair columnist
March 1988 issue submitted
Comments: The TS Special Interest Group gets about half of a page of space in a 12 page non-specific computer group newsletter. Gary fills in the space with as much good Sinclair information as he can, including news about upcoming and past Timex meetings.

8. "FDD EXPRESS"
Zebra Disk Drive System Newsletter
(4307 Chambers Rd., Horseheads, NY 14845)
Ron Havelin-editor
Comments. This special interest group newsletter is a magnificient effort by Ron Havelin. In fact, all Zebra owners should be grateful to Ron for rescuing the old defunct newsletter (TOPS). The "Express" is faithfully published on a monthly basis, and is loaded with useful tips for the old silver "three piece" and the newer FDD-3000 2068 disk drive systems. There has been a lot of CP/M coverage in recent isssues.

QL_DOC

SINCLAIR QL NEWSLETTER

We received an interesting newsletter after the committee had made the top ten selection. Even if it had been sent in earlier, I doubt that the committee would have been able to give it a qualified evaluation since it is written entirely in FRENCH! QL_DOC is the newsletter of a QL special interest group which is published six times a year. The annual subscription rate is $10 (U.S. or Canada), and TDM readers can receive a sample issue for only one dollar, by writing to the editor of QL_DOC: Real Gagnon, 4870 Henri-Julien, Montreal, Quebec, Canada, H2T 2E1. While I understands very little French, I did receive some translated versions of a couple of articles that have appeared in the newsletter. They are very well done, and the editor has graciously granted us permission to print them in upcoming issues of TDM.

If French is your second or even first language, then QL_DOC is highly recommended.

SINCLAIR AND TIMEX Directory of Suppliers

A NOTE ABOUT THIS DIRECTORY

The information provided in this directory was supplied to TIME DESIGNS by the companies who are listed in it. We have tried to make it as complete and accurate as possible. However, just as time marches on, so do events and circumstances. Therefore, we suggest that you contact the individual dealers and suppliers for the most updated information.

There are a few guidlines that should be observed when using this directory. When calling a particular TS supplier by phone, the hours posted for business are good for the time zone where the business resides. This should be taken into consideration. A time zone/area code map can usually be found towards the front of most phone books.

When a particular company states that a brochure or catalog can be obtained by sending a "SASE" (self-addressed stamped envelope), this generally indicates a full size legal envelope with a first class (25 cent) stamp.

When it is stated that a particular company accepts major credit cards, this normally indicates that VISA and MASTERCARD are accepted.

We here at TDM highly encourage you to use this directory. Most companies would be "tickled to death" to receive your business. After all, your business is what will keep Timex Sinclair products available for some time to come.

If somehow, your company was not included in this listing, please contact TIME DESIGNS, so that we may include the information in an update. However, we feel that this list provides the most complete listing of suppliers to date.

In this regard, we ask that you kindly do not make copies of this directory, but that you encourage others to write for additional copies of this issue, which can be obtained for just $3.00 (postage paid). We have ordered from our publisher lots of extra copies to have on hand for this purpose.

- Tim Woods

Timex Sinclair Dealer Information Key

a) COMPANY'S NAME
b) MAILING ADDRESS
c) PHONE NUMBER (if available)
d) BUSINESS HOURS
e) CATALOG OR BROCHURE AVAILABLE
f) HOW CATALOG/BROCHURE CAN BE OBTAINED
g) CREDIT CARDS ACCEPTED
h) YEAR COMPANY WAS ESTABLISHED
i) FOUNDER(S) OF THE COMPANY
j) COMPUTER MERCHANDISE OFFERED (see abbreviation key)
k) ADDITIONAL INFORMATION

Merchandise Abbreviation Key

"sw" = software
"hw" = hardware
"1000" = compatible with TS1000, TS1500, and ZX81
"2068" = Timex Sinclair 2068
"spec" = ZX Spectrum or Emulated 2068
"QL" = Sinclair QL
"Z88" = Cambridge Computer Z88 laptop
"8300" - Unisonic PC8300 (a Timex 1000 clone)
"psion" = PSION Organizer pocket computer
"periph" = non-computer specific peripherals
such as printers, modems, etc.
"parts" = computer parts and accessories
such as cables, disks, RAM chips, etc.
"repair" = computer repair services
"pub" = computer publications (books/magazines)
"pc" = IBM PC's and compatibles such as Amstrad
"other" = other computer brands such as Atari,
Commodore, Apple, etc.

a) A+ Computer Response, Inc.
b) 220 Centre St.
Sullivan, NH 03445
c) (603) 847-3373
d) 9am-5:30pm, mon-fri
e) yes
f) write or call
g) yes
h) 1985
i) Carol and George Whitham
j) QL hw; periph; pc hw; other hw; repair
k)

a) Aeroe
b) Box 18093
Austin, TX 78760
c) (512) 451-5[illegible]
d) 9am-8pm
e) yes
f) write or call
g) yes
h) 1979
i) Jerry and Til Chankis
j) 1000 hw; 2068 sw, hw; periph; parts; repair; other hw
k) custom hardware design
DONE

a) A.F.R. Software
b) 1605 Pennsylvania Ave #204
Miami Beach, FL 33139
c) (305) 531-6464
d) 9am-5pm, mon-fri
e) yes
f) SASE
g) no
h) 1984
i) Albert F. Rodriquez
j) 1000 sw; 2068 sw
k)

a) American Design Components
b) 82 Joseph St.
Moonachie, NJ 07074
c) (201) 939-2710
(800) 524-0809
d) 9am-5pm, mon-fri
e) yes
f) write or call
g) yes
h)
i)
j) 8300 hw; periph; parts; pc hw; other hw
k) electronic surplus
DONE

a) American Micro Connection
b) 1258 Henderson Ave. #4
Sunnyvale, CA 94088
c)
d) mail order
e) yes
f) SASE
g) no
h) 1987
i) Andy Hradesky
j) QL sw, hw; periph; parts; other sw, hw
k)

a) Banta Software
b) 8088 Highwood Way
Orangevale, CA 95662
c) (916) 722-4885
d) 6-9pm, mon-sat
e) yes
f) SASE
g) no
h) 1980
i) Andrew Banta and Andrew Banta Jr
j) 1000 sw; 2068 sw; pc sw
k)

a) Beaver Computer Products
b) 758 Fleming Avenue
Winnipeg, Manitoba
Canada R2K 1V5
c) (204) 663-2931
d) 6-9pm, mon-thurs.
e) yes (catalog/demonstration cassette)
f) send $1.50 to above address
g) no
h) 1985
i) Russell Ochocki
j) 2068 sw
k)

a) Bill Bell
b) 598 Cherrington Rd.
Westerville, OH 43081
c) (614) 882-3883
d) evenings
e) yes
f) SASE
g) no
h) 1985
i) Bill Bell
j) 1000 sw
k) improved DOS for Aeroe disk system (TS1000)

a) Paul Bingham
b) PO Box 2034
Mesa, AZ 85214
c)
d) mail order only
e) see ads in TIME DESIGNS
f) write for further info
g) no
h) 1982
i) Paul Bingham, Rick Goulian
j) 1000 sw; 2068 sw
k) (formerly "Pleasantrees Programming")

a) Herb Bowers Sr (A*B*B*A SOFT)
b) 2588 Woodshire Cir.
Chesapeake, VA 23323
c) (804) 487-5924
d) evenings
e) yes
f) SASE
g) no
h) 1988
i) Herb Bowers Sr
j) 2068 sw
k) specializing in tax return preparation

a) Brooklyn Closeout Corporation
b) 167 Clymer St.
Brooklyn, NY 11211
c) (718) 963-2377
d) 9am-5pm, mon-fri
e)
f) write or call for info
g) yes
h)
i)
j) 1000 sw, hw; 2068 sw, hw, periph; parts; other sw, hw
k) new/used/reconditioned electronic surplus
Do

a) Budget Robotics & Computing, Inc.
b) Box 18618
Tucson, AZ 85731
c)
d) mail order only
e) yes
f) write-all questions answered
g) no
h) 1984
i) Bruce C. Taylor
j) 1000 hw; 2068 hw; 8300 hw; pub; periph; parts
k) repair service for hardware items
Do

a) Byte-Back, Inc.
b) 538 Long Terrace, PO Box 112
Leesville, SC 29070
c) (803) 532-5812
d) 6-10pm, mon-sat
e) yes
f) write or call
g) yes
h) 1981
i) Jerry and Tricia Minchey (current owner: David Leach)
j) 1000 hw; 2068 hw; pc hw
k)

a) Byte Power
b) 1748 Meadowview Ave
Pickering, Ontario
Canada L1V 3G8
c)
d) 12noon-9pm
e) yes
f) $2.00 for catalog and demo
g) no
h) 1988
i) Eric and Kristian Boisvert
j) 1000 sw; 2068 sw, hw; spec sw
k)
Do

a) CairoSoft
b) PO Box 10024
Hickory, NC 28602
c)
d) 9am-5pm
e) yes
f) write
g) no
h) 1987
i) Dr. Faisal El-Shoufy
j) 2068 sw; QL sw; pc sw; other sw
k) also offers computer training

a) Michael Carver
b) 1016 N.W. Tillamook
Portland, OR 97212
c)
d) mail order only
e)
f) yes
g) SASE
h) 1982
i) Michael E. Carver
j) 1000 sw; 2068 sw; QL sw
k)

a) Kurt A. Casby
b) 25 Battle Creek Court
St. Paul, MN 55118
c) (612) 735-3637
d) evenings
e) yes
f) SASE
g) no
h) 1984
i) Kurt A. Casby
j) 2068 sw
k)

a) Chia-Chi Chao
b) 73 Sullivan Dr
Moraga, CA 94556
c)
d) mail order only
e) yes
f) SASE (or send first class stamp)
g) no
h) 1985
i) Chia-Chi Chao
j) 1000 sw; [illegible] sw
k) specializing in software for Aerco FD-88

a) Church School Software
b) 601 N. Highway 83
Bensenville, IL 60106
c) (312) 766-3848
d) mail order only
e) yes
f) SASE
g) no
h) 1982
i)
j) 1000 sw; pc sw; other sw
k) featuring family software

a) Computer Continuum
b) 75 Southgate Ave, suite 6
Daly City, CA 94015
c) (415) 755-1978
d)
e) yes
f) call, or send SASE
g) yes
h) 1980
i) Eric Wreiter
j) 1000 hw; pc hw; other hw
k) digital oscillascope/spectrum analysis

a) Computer Shopper, Inc.
b) 5211 S. Washington Ave., PO Box F
Titusville, FL 32781
c) (305) 269-3211
d) 9am-5pm
e) "Computer Shopper" Magazine - $2.95 issue
f) individual issues sold at computer stores
g) yes
h) 1980
i) Glenn E. Patch (Publisher: Stan Veit)
j) pub
k)

a) Curry Computer
b) PO Box 5807
Glendale, AZ 85312
c) (607) 978-2902
d) 9am-8pm, mon-fri, 10am-2pm, sat
e) yes
f) SASE - request computer type
g) yes
h) 1982
i) Rob and Debby Curry
j) 1000 sw, hw; 2068 sw; spec sw, hw; QL sw, hw; Z88 sw, hw; psion sw, hw; pc sw, hw; periph; [illegible], other sw, hw
k) pc disk conversions, 5.25" to 3.5"

a) Cuyahoga Valley Software Works
b) 615 School Ave
Cuyahoga Falls, OH 44221
c) (216) 928-7910
d) 6-9pm
e) yes
f) SASE
g) no
h) 1988
i) Thomas Simon
j) 2068 sw
k)

a) C.W. Associates
b) 419 N. Johnson St.
Ada, OH 45810
c) (419) 634-4874
d) 9am-9pm
e) yes
f) write or call
g) yes
h) 1983
i) Dr. Kenneth Wildman
j) QL sw, hw; Z88 sw, hw; periph
k) consultation and programming services offered

a) Delphic Enterprises
b) PO Box 72205
Corpus Christi, TX 78472
c) (512) 854-5873
d) mail order only
e) yes
f) SASE
g) no
h) 1981
i) Peter Hoffman
j) 1000 sw, hw; other sw, hw
k) 4K & 8K EPROMs with machine code utilities

a) Jack Dohany
b) 390 Rutherford
Redwood City, CA 94061
c) (415) 367-7781
d) 10am-10pm, 7 days/week
e) yes
f) send $1 (no SASE needed)
g) no
h) 1938
i) Mom & Pop
j) 2068 sw; spec sw
k)

a) [illegible] Scientific Company
b) PO Box 4132
Star City, WV 26505
c) (304) 594-1639
d) 9am-5pm, mon-fri
e) yes
f) write or call
g) no
h) 1970
i) Dr. Oleg Jefimenko
j) 2068 sw; [illegible]; pc sw
k)

MUSIC STUFF

a) EMSOFT
b) PO Box 8783
Boston, MA 02114
c) (617) 868-0830
d) 9am-6pm
e)
f) write or call for info
g) no
h) 1987
i) Peter Hale
j) QL sw
k)

a) EZ-Key
b) 225 Beach St.
Wollaston, MA 02170
c) (617) 773-9520
d) 6-8pm
e) yes
f) SASE
g) no
h) 1972
i) Henry April
j) 1000 sw, hw; QL sw, hw; periph
k)

a) Ezra Group II
b) PO Box 5222
San Diego, CA 92105
c)
d) mail order only
e) yes
f) SASE
g) no
h) 1982
i) Paul Ezra
j) 1000 sw; 2068 sw; 8300 sw; other sw
k) specializes in program listings

a) Bill Ferrebee
Mountaineer Software
b) 749 Hill St. #6
Parkersburg, WV 26104
c) (304) 424-7272
d) evenings
e) yes
f) SASE
g) no
h) 1983
i) Bill Ferrebee
j) 2068 sw
k)

a) [illegible] Fink
b) 355 W. 39th St.
New York, NY 10018
c) (212) 885-8598 - answering machine
d)
e) yes
f) SASE
g) no
h) 1987
i) Mike Fink
j) 2068 sw
k)

a) Foote Software
b) PO Box 14655
Gainesville, FL 32604
c) (904) 338-1273
d) 8am-6pm
e) yes
f) SASE
g) no
h) 1982
i) Joe Williamson
j) 1000 sw; 2068 sw, hw; periph; pub
k)

a) Dave Franson
b) 3534A E Squire Ave
Cudahy, WI 53110
c) (414) 481-6613
d) evenings
e) yes
f) SASE
g) no
h) 1986
i) Dave Franson
j) 2068 sw
k)

a) Ed Grey Enterprises
b) PO Box 2186
Inglewood, CA 90305
c) (213) 759-7406
d) 6-9pm
e) yes *
f) write or call
g) no
h) 1986 (formerly "Grey & Clifford")
i) Ed Grey
j) 1000 sw, hw, 2068 sw, hw; spec sw;
periph; parts; Z80 sw, hw
k)

DONE

a) Group Technology, Ltd
b) 6925 Dogwood Rd.
Baltimore, MD 21207
c) (301) 298-5718
d) 8am-8pm
e) yes *
f) write or call
g) yes
h) 1978
i) F.I. Scott Jr, V.F. Scott,
D. Larsen, C. Titus, J. Titus
j) 1000 hw; 2068 hw; pub
k)

DONE

FOOTE SOFTWARE

The FOOTE PRINT PRINTER INTERFACE

- for Centronics parallel printers
- works in both 2068 and Spectrum mode
- compatible with OS-64 & Spectrum emulators
- EPROM socket and on/off switch on board
- works with **both** Tasman and Aerco driver software
- plugs into cartridge dock—door completely closes with cable running back under computer
- frees up rear edge connector allowing other peripherals to be used; less chance of a crash
- print driver software for LPRINT, LLIST, and COPY included for 2068 and Spectrum modes

FootePrint Interface w/software & cable $39.95
FootePrint with OS-64 option included $60.00
Bare board & instructions only $15.00
Cable only for use with bare board $15.00
Zero Insertion Force Socket option add $8.00

Summer Westcoast TS Fair Special

SOFTWARE	TS2068	TS1000	
Badgammon (Backgammon)	$10.00		$5.00
Advanced Math (Calculus)	$10.00		
Calorie Counter	$8.00		
U.S.A. (Pres. & States & Caps.)	$8.00		
Gambler (poker)	$8.00		
CHR$ (char. & graphics generator)	$10.00		
Hangman & TIC–TAC–TOE	$5.00		

The Best of SUM

Some sample articles include: Building Your Own Spectrum Emulator, Repairing Your TS-1000, Word Processing Reviews for the 2068, UDGs on the TS-1000, Extensive Review of the Zebra Disk System, Adding a Keyboard to the 2068, and Enhancing the A & J Microdrive. 112 pages

$10.00

The Best of SUM, Part II

Articles include Building an EPROM Programmer, Sprites on the 2068, Adding RGB to 2068, QL Word Processing, What's Available for TS-1000, and much more. 60 pages

$7.00

BOTH for $15.00

FOOTE SOFTWARE
P. O. Box 14655
Gainesville, FL 32604
(904) 338-1273 (9AM-6PM EDT)
All prices are pre-paid and include shipping charges.
Florida residents must add state sales tax.

a) Hal-Tronix, Inc.
b) 12871 Dix Toledo Hwy
Southgate, MI 48195
c) (313) 281-7773
d) 12noon-6pm, mon-sat
e) yes
f) SASE (or send first class stamp)
g) yes
h) 1968
i) Hal Nowland
j) 1000 sw, hw; periph; parts; pc
k) also stocks items for ham radio enthusiasts

a) Hawc Programming
b) 4804 Apple Tree Drive
Alexandria, VA 22310
c) (703) 971-7593
d)
e) yes (program description sheets)
f) SASE
g) no
h) 1982
i) Harvey Wasserman
j) 1000 sw
k)

a) W.P. Hosey (Hardbook Software)
b) Box 135
Red Rock, TX 78662
c) (512) 639-4516
d)
e) yes
f) SASE
g) no
h) 1987
i) V. Phillip Hosey
j) 2068 sw
k)

a) Paul Hunter
b) 1630 Forest Hills Dr
Okemos, MI 48864
c) (517) 349-5650
d)
e) yes
f) SASE
g) no
h) 1981
i) Dr. Paul Hunter
j) 1000 sw
k) TS1000 bank-switching system (software based)

a) Info-Nation
b) RR#1 Box 280
California, MO 65018
c) (314) 796-4921
d) 6:30-10pm
e) yes
f) write or call
g) no
h) 1984
i) David Bleich
j) 1000 sw; QL sw, hw
k)

a) Eric Johnson
b) 249 N. Harden Ave
Orange City, FL 32763
c) (904) 775-4995
d) 6-9pm
e)
f) write or mail for info
g) no
h) 1988
i) Eric A. Johnson
j) 1000 hw; 2068 hw; parts; repair
k) surplus reconditioned Timex equipment

DO

a) Kamrec Systems
b) 31274 Springlake #5304
Walled Lake, MI 48088
c)
d)
e) yes
f) SASE
g) no
h) 1985
i) Steve Cermak
j) 2068 sw; QL sw
k)

a) B F Kimbrough Jr
b) 723 Roselle Ave, floor 2
Akron, OH 44307
c)
d)
e) yes
f) SASE
g) no
h) 1986
i) B F Kimbrough Jr
j) 1000 sw
k)

a) Ray Kingsley (formerly "Sinware")
b) 1710 Oliver Ave.
San Diego, CA 92109
c)
d) mail order only
e) information available
f) write, SASE
g) no
h) 1981 (Sinware)
i) Ray Kingsley
j) 1000 sw; 2068 sw
k)

a) K.I.S.S./computers
b) 342 Trotter Court
Sanford, FL 32773
c)
d) mail order only
e) yes
f) SASE
g) no
h) 1980
i) Munson H. Cockayne Jr & Robert Cockayne
j) 2068 sw, hw
k)

DO

a) Knighted Computers
b) 12 Canalview Mall
Fulton, NY 13069
c) (315) 593-8219
d) 10am-5pm, 6-9pm, mon-fri, 9am-2pm, sat
e) yes
f) write or mail
g) yes
h) 1984
i) Ray Payne and Joe Aiello
j) 1000 sw; 2068 sw
k)

a) Larken Electronics
b) RR #2 Navan, Ontario
Canada K4B 1H9
c) (613) 835-2880
d) evenings, sunday-thurs
e) yes
f) write or mail
g) no
h) 1985
i) Larry Kenny
j) 1000 hw; 2068 sw, hw
k) specializing in mass storage for Timex computers

DO

a) Lenke Software Development
b) 2144 White Oak
Wichita, KS 67207
c) (316) 687 0315
d) 6-10pm, mon-fri
e) yes
f) write or call
g) no
h) 1984
i) Stan Lenke
j) 2068 sw
k) 32K RAM Cartridge also available

a) Frank Lockhart
b) PO Box 1131
Shelby, NC 28150
c) (704) 484-8539
d) 9am-8pm, mon-sat
e) [illegible]
f) SASE (or call)
g) no
h) 1980
i) Frank Lockhart, BSME
j) 1000 sw; 2068 sw; QL sw
k) custom programming available

MASS-STORAGE SYSTEMS
WE HAVE THEM!

If you want to move up to a mass-storage device that will cure your "cassette" blues!?!

Now is your chance! We have many systems to choose from, with a price range for any budget.

We have RAMDISK and standard DISK drives for you!

If you are new to "fast" mass-storage devices, you may opt for the new memory unit that simply plugs onto the rear edge connector of your 2068. It can give you up to 256,000 Bytes of SUPERFAST data storage. With this unit you can LOAD from your cassette, SAVE to the memory unit and from then on simply LOAD it in from the memory unit when you turn on the computer. THAT'S RIGHT! EVEN IF YOU TURN OFF THE 2068, YOUR PROGRAM WILL BE "INSTANTLY" AVAILABLE TO YOU!

If this and other storage devices are of interest to you, please write or call:

RMG ENTERPRISES
1419 1/2 7TH STREET
OREGON CITY, OR 97045 (503)655-7484

PRICE FOR RAMDISK MENTIONED ABOVE:$79.95+$4sh FOR PC64 32K RAM.

a) LST Software
b) PO Box 62
Alcester, SD 57001
c)
d) mail order only
e) yes
f) SASE
g) no
h) 1986
i) Chuck Peterson
j) 1000 sw
k)

a) Markel Enterprises
b) 4712 Ave "N", suite 383
Brooklyn, NY 11234
c) (718) 627-1293
d) 8am-9pm
e) yes
f) SASE
g) no
h) [illegible]
i) Mark Fendrick
j) 1000 sw; 2068 sw; QL sw
k) DONE

a) John Mathewson
b) 1852 Appleford St.
Gloucester, Ontario
Canada K1J 6T4
c) (613) 746-7869
d) 9am-10pm
e) yes
f) write or call
g) no
h) 1983
i) John Mathewson
j) 1000 hw; 2068 hw
k) DONE RGB KYBD SPECTWISTER CART RAMWAPPER

a) McBrine Computer Products
b) 514 S. Jackson St.
Salisbury, NC 28144
c) (704) 633-7887
d) evenings
e) yes
f) write or call
g) no
h) 1987
i) William J. McBrine III
j) 2068 sw (spec sw; 1000 sw; 2068 hw under development)
k) custom programming for 2068 offered

a) John McMichael
b) 1710 Palmer Dr.
Laramie, WY 82070
c) (307) 742-4530
d) 5-10pm (evenings)
e) yes
f) write or call
g) no
h) 1987
i) me, myself & I
j) 2068 sw, hw
k) DO

a) M.D.M. Enterprises
b) 706 S. Mason
Saginaw, MI 48602
c) (517) 791-1088
d) evenings
e)
f) write or call for product information
g)
h) 1986
i) Duane Malburg, Mike Davis
j) 1000 sw, hw; 2068 sw
k) specializing in software development

a) John Meshna Jr, Inc.
b) 19 Allerton St.
Lynn, MA 01904
c) (617) 595-2275
d) 9am-5pm, mon-fri
e) yes
f) SASE
g) yes
h) 1980
i) John Meshna Jr
j) 1000 sw, hw; 8300 hw; periph; parts
k) specializes in new and used surplus

DONE

a) Meta Media Productions
726-West 17th
Vancouver, B.C.
Canada V5Z 1T9
c)
d) mail order only
e) yes
f) write
g) no
h) 1984
i) Harvey Taylor
j) QL sw
k)

a) MIN-NY Electronics, Inc.
b) 7332 Douglas Dr.
Brooklyn Park, MN 55443
c) (812) 566-7094
d) 6-10pm
e)
f) write or mail for info
g) no
h) 1985
i)
j) 1000 sw, hw; QL sw, hw; po hw; other hw
k)

a) Novelsoft
b) 35 Candle Liteway
Willowdale, Ontario
Canada M2R 3J5
c) (416) 665-0290
d) evenings
e) yes
f) write or call
g) no
h) 1986
i) David Ridge, Ariel Frailich
j) 2068 sw; spec sw
k)

a) The John Oliger Company
b) 11601 Whidbey Dr.
Cumberland, IN 46229
c)
d) evenings
e) yes
f) SASE
g) no
h) 1983
i) John Oliger
j) 1000 hw; 2068 hw
k)

a) Jack Payne
Budgetsoft
b) 1107 Morgan St.
Rushville, IN 46173
c) (317) 932-2431
d) mail order only
e) yes
f) SASE
g) no
h) 1984
i) Jack Payne
j) 2068 sw
k) unique software for fishing

a) Promise Land Electronics
b) Rt 1 Box 117
Cabool, MO 65689
c) (314) 739-1712 (evenings)
(417) 469-4571 (weekends)
d) 6-11pm, daily
e) yes
f) write or call
g) no
h) 1984
i) Dan Elliott
j) repair
k) repair and modifications for all Sinclair models

a) Prospero Software Ltd.
b) 100 Commercial St. #306
Portland, ME 04101
c) (207) 874-0382
d) 9am-5pm
e) yes
f) write or call (request QL software brochure)
g) yes
h) U.S. division of U.K. software company
i)
j) QL sw
k) Pascal and Fortran

a) Pyramid Electronics
b) 2174 Gulf Gate Dr.
Sarasota, FL 34231
c) (813) 922-9574
d) 9am-5pm, mon-fri, 9am-1pm (every other sat.)
e) yes
f) SASE
g) yes
h) 1982
i) Dr. Donald Dean
j) 1000 sw, hw; 2068 sw, hw; QL sw, hw
k)

DONE

a) Tom Bent/Quantum Levels
b) 9016 Flicker Place
Columbia, MD 21045
c)
d) 6-9pm
e)
f) write for information
g) no
h) 1982
i) Tom Bent
j) 1000 hw; 2068 hw; QL hw; 288 hw
k) U.S. Quanta librarian of QL software

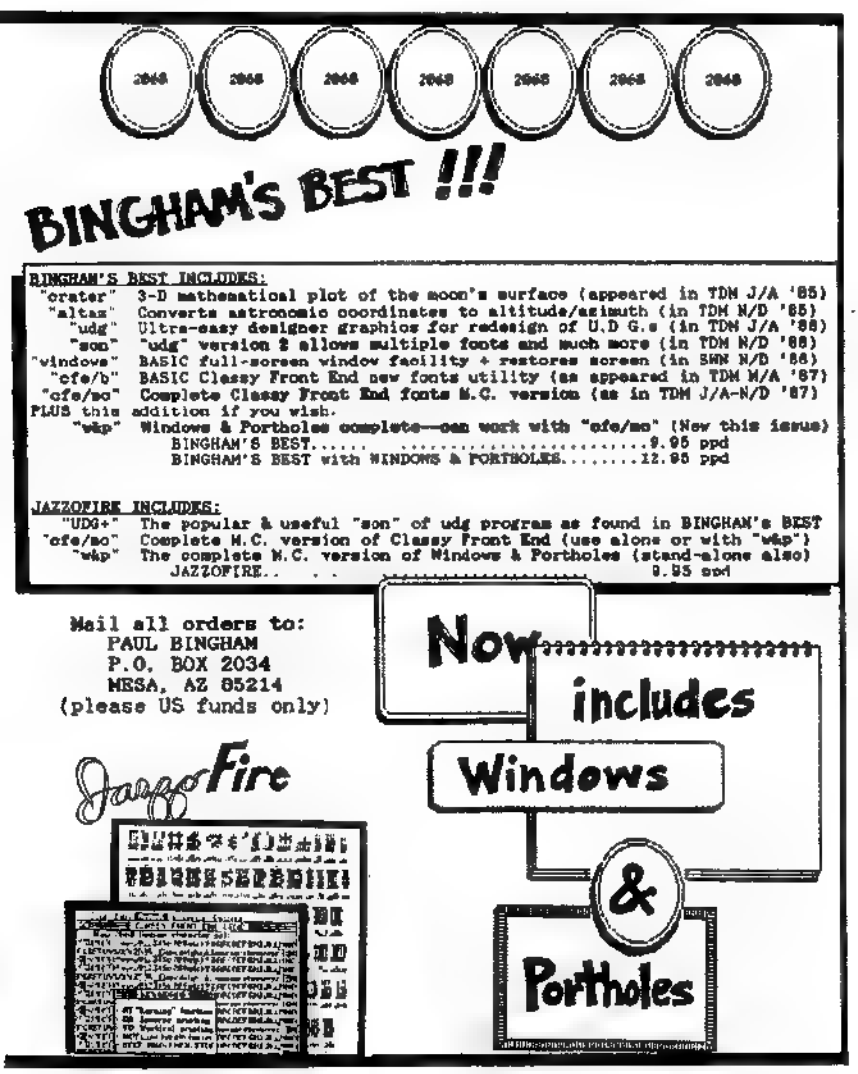
DO

a) Ray Rash
b) 2424 SW 76th St.
Oklahoma City, OK 73159
c)
d) mail order only
e) yes
f) SASE
g) no
h) 1985
i) E. Ray Rash
j) 2068 sw
k)

a) Riverside Software
b) Rt 1 Box B 20
Orrington, ME 04474
c)
d)
e) yes
f) SASE
g) no
h) 1987
i)
j) 2068 sw
k)

a) RMG Enterprises
b) 1419 1/2 7th Street
Oregon City, OR 97045
c) (503) 655-7484
d) 12noon-10pm, tues-sat.
e) [illegible]
f) $3 for large catalog (refunded on 1st order)
call/write for further information
g) [illegible]
h) 1981 (for Sinclair sales)
i) Rod Gowen
j) 1000 sw, hw, 2068 sw, hw; QL sw, hw; Z68 sw, hw;
8300 hw; periph; parts; pc sw, hw; pub
k)
DONE

a) [illegible] Romer
b) 31 Fowlers St.
Jamestown, RI 02835
c) (401) 423-2666
d) 9am-9pm
e) yes
f) SASE
g) no
h) 1987
i) Frederick R. Romer
j) 2068 sw
k)



a) Ron Ruegg
b) 37529 Perkins Rd
Prairieville, LA 70769
c) (504) 673-3012
d) evenings
e) yes
f) SASE
g) no
h) 1986
i) Ronald R. Ruegg
j) 2068 sw
k)

a) Russell Electronics
b) RD 1 Box 539
Centre Hall, PA 16828
c) (814) 364-1325
d) 9am-6pm, mon-sat
e) [illegible]
f) write or call
g) [illegible]
h) 1981
i) Bill and Gerry Russell
j) 1000 sw, hw; 2068 sw, hw; QL sw, hw
k)
DONE

a) Howard W. Sams & Co., Inc.
b) 4300 West 62nd St.
Indianapolis, IN 46268
c) (317) 298-5400
(800) 428-7267
d) 8am-5pm, mon-fri
e) yes, list of "Computerfacts"
f) write or call
g) yes
h)
i)
j) pub
k) repair data for TS1000 and TS2068
DONE

a) Sharp's Inc.
b) Rt 10 Box 459
Mechanicsville, VA 23111
c) (804) 746-1684
d) 9am-4pm
e) yes
f) write or call
g) yes
h) 1982
i) Mark Stueber
j) 2068 sw; QL sw, hw; Z88 sw, hw; psion sw, hw;
repair
k)

a) Silicon Mountain Electronics
b) C-12, Mtn. Stn. Group Box
Nelson, B.C.
Canada V1L 2J3
c)
d)
e) list of dealers available
f) write
g)
h) 1988 (formerly Silicon Mtn. Computers)
i) Fred Nachbaur
j) 1000 sw; 8300 hw; other sw, hw
k) electronic/computer research & development

a) SiriusWare
b) 6 Turning Mill Rd.
Lexington, MA 02173
c)
d) mail order only
e) yes
f) [illegible]
g) yes
h) 1983
i) David B. Wood
j) 1000 sw
k)

a) SSI (div. of New England Sales)
b) 424 Cumberland Ave.
Portland, ME 04101
c) (207) 761-3700
d) 9am-5pm, mon-fri
e) yes
f) write or call for dealer list
g)
h) 1988 (SSI)
i) Z88 sw, hw
j) U.S. distributor for Z88 laptop
k)

a) Shawn Stamp
b) 3405 Mark Ln.
Norton, OH 44203
c) (216) 825-9133
d) most evenings
e) yes
f) SASE
g) no
h) 1987
i) Shawn Stamp
j) 2068 sw
k)

a) Sunset Electronics
b) 2254 Taraval Street
San Francisco, CA 94116
c) (415) 885-6181
d) 10am-6pm, mon-fri, 10am-5pm, sat
e) yes
f) write or call
g) yes
h) 1975
i) John Warburton
j) 1000 sw, hw; 2068 sw, hw; spec sw, hw; periph; parts; pc sw, hw; other sw, hw
k)
DONE 30 DAYS
CALL SOLD TO: ____

a) The SyncWare Group
b) 802 S. Hill St.
Louisville, OH 44641
c) (216) 875-1257
d) 9am-9pm
e) sample issue(s) available
f) $2.00 for sample; write or call
g) yes
h) 1983
i) Fred Nachbaur, Tom Woods
j) pub
k)

a) T & C Services
b) 20 Liberty Ter.
Buffalo, NY 14215
c) (718) 834-1718
d) 9am-10pm
e) yes
f) write or call
g)
h) 1987
i) Tom Jankowski
j) 1000 sw, hw; 2068 sw, hw; QL sw
k)
DONE
* Giel

a) Tesseract Software Development
b) 2519 Bishop Ave.
Fremont, CA 94538
c) (415) 798-0388
d) evenings, mail order only
e) yes
f) SASE
g) no
h) 1984
i) Robert Fingerle
j) 1000 sw; 2068 sw; QL sw
k)

a) Vern Tidwell
b) 127 W. 7th Ave. Cud. Gardens
Summerland Key, FL 33042
c) (305) 745-2447
d) 6-9pm
e) yes
f) SASE
g) no
h) 1985
i) Vern Tidwell
j) 2068 sw
k)

a) Time Designs
b) 29722 Hult Rd
Colton, OR 97017
c) (503) 824-2658
d) 5-10pm, mon-fri, 10am-10pm most Sat., answering service all other times
e) yes
f) write or call
g) yes
h) 1983
i) Tim and Stephanie Woods
j) pub
k)

a) Timeware
b) 1807 1/2 W. Genesee St.
Syracuse, NY 13204
c)
d) mail order only
e) yes
f) SASE
g) no
h) 1985
i) Patrick Dunn
j) 2068 sw; other sw
k)

a) TS-2068 UP-DATE
b) 1317 Stratford Ave
Panama City, FL 32404
c)
d)
e) yes
f) SASE
g) no
h) 1984
i) Bill Jones
j) 2068 sw; pub
k)

a) Variety Computers and Electronics
b) 325 W. Jersey St., Suite 2-D
Elizabeth, NJ 07202
c) (201) 527-0535
d)
e) yes
f) write or call
g) no
h) 1985
i) Joe Newman
j) 2068 sw, hw; QL sw, hw; periph; parts; psion sw, hw
k)
DO

a) The WIDJUP Company
b) 1120 Merrifield S.E.
Grand Rapids, MI 49507
c) (616) 452-7004
d) 9am-9pm
e) yes
f) SASE
g) no
h)
i) William Pedersen
j) 1000 sw; 2068 sw; pub
k)

a) Willcocks Research Consultants (Games Div.)
b) 6321 West 78th Place
Los Angeles, CA 90045
c) (213) 215-0780
d) 9am-8pm
e) yes
f) write or call
g) no
h) 1977
i) Martin and Carole Willcocks
j) 1000 sw; QL sw; other sw
k) software consulting/programming services

a) WMJ Data Systems
b) 4 Butterfly Dr
Hauppauge, NY 11788
c) (516) 543-5252
d) 1pm-6pm
e) yes
f) write or call
g) yes
h) 1983
i) William M. Johnson
j) 1000 sw, hw; 2068 sw, hw; parts; po sw, hw; other sw, hw
k)

DONE

a) Wood and Wind Computing
b) RR 2 Box 92
Cornish, NH 03745
c) (603) 675-2216
d)
e) yes
f) SASE
g) no
h) 1987
i) Bill Cable
j) QL sw
k)

a) Zebra Systems, Inc.
b) 78-06 Jamaica Ave.
Woodhaven, NY 11421
c) (718) 296-2365
d) 8am-5pm, mon-fri
e) yes
f) write or call
g) yes
h) 1983
i) Stewart Newfeld
j) 1000 sw, hw; 2068 sw, hw; Z88 sw, hw
k)

DONE

a) Matthew Zenkar
b) 142 Holcroft Rd.
Rochester, NY 14612
c) (716) 663-2048
d) 6.30-10pm
e) yes
f) write or call
g) yes
h) 1987
i) Matthew Zenkar
j) QL sw, hw
k)

a) Zunk Custom Electronics
b) 4800 E. Cedar Lane
Norman, OK 73071
c) (405) 366-8585
d) 6-9pm
e) yes
f) write or call
g) no
h) 1988
i) Larry Zunk
j) 2068 sw, hw; periph; parts
k) hardware prototypes and custom orders

IT'S A SINCLAIR SUMMER!!

A sizeable crowd of Sinclair users is expected to attend the two-day event called the 3RD ANNUAL INTERNATIONAL/GREAT NORTHWEST TS MINI-FAIR, which will be held on August 6 and 7 (Saturday and Sunday), at the Cosmopolitan Hotel in Portland, Oregon. The location is only a day's drive or less from most parts of the west coast.

Many well known guest speakers will be giving seminars, including: Mike de Sosa (author of "Taking The Quantum Leap), Jack Dohany, Stan Lemke (2068 Desktop Publishing), Harvey Taylor (Meta Media Productions), Vince Lyon (author of "Archive Master), Wilf Richter, Ed Grey, and several others. A variety of Sinclair dealers will be on hand to display and sell their wares, including: Zebra Systems, Sharp's Inc., RMG Enterprises, Ed Grey Enterprises, Time Designs, and others.

Over seven TS User Groups will be represented, the national distributor for the Z88 will be on hand, and many non-computer activities are planned for all ages (so bring the whole family!).

For further information, contact the show director, Rod Gowen, 1419 1/2 7th St., Oregon City, OR 97045, (503) 655-7484.

Just two weeks later in Cleveland, Ohio, at the Beck Center (in Lakewood), will be held the MIDWEST SINCLAIR COMPUTER CONFERENCE, on August 27 and 28 (Saturday and Sunday).

A whole schedule of seminars, displays by Sinclair hardware and software dealers, and participation by midwest TS user groups, are some of the activities that have been planned.

For further information write to: Andy Kosiorek, 2192 Glenbury Ave., Lakewood, Ohio, 44107.

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CLASSY FRONT END

Windows

by Paul Bingham

I would like to begin this time by taking a big step backward. Let me explain that sometimes we writers send in our copy to meet deadline and then in the weeks that follow sometimes come up with something better. Such a thing happened to me since last issue.

Last time we looked at a short machine code program (as listing 2) that among other things used ROM calls to draw round post-it-notes I call portholes. Now ordinarily using ROM code is a good idea because it saves the programmer from having to write routines that already exist, which saves RAM space. But what kept sticking in my craw was how slow the ROM code drew those portholes. Then an idea hit me that I figured would do the job a little quicker. But it involved (gulp) scrapping some code I had already sent in and had published last issue. I knew such thoughts would bring a fire storm of mail from all those loyal typists who had finally got it all entered.

Well I tried out my new route to quicker portholes and found that it meant more code, almost a half K more! But when I ran it and saw the SPEED, I knew I had to do it, come what may. The old code drew a porthole with a shadow and all in just over 4 seconds. So to draw 1000 portholes would take about an hour and ten minutes. The new code will draw 1000 portholes in 58.6 SECONDS. Can you blame me?

This new code appears as Listing 1. Also included are 448 bytes (lines 1485 through 1500) which include all the graphic info for CLASSY's seven window styles. Once these 1184 bytes of code are in place, we can use the demo program in Listing 2 to do portholes and windows! Two samples are found in Figure A and B.

As always, pay close attention to the line numbers in these listings and SAVE your efforts. Sooner or later we can all have a MERGE party and put the whole 5K CFE together! Remember to scrap Listing 2 of last time in favor of Listing 1 this issue. However, don't scrap the other Listings of last issue. Listing 1 is fine and Listing 3 only needs some changes (these are detailed in Figure C).

Windows are facinating and out of twenty or more good ones I came up with, the seven included in the program were the top vote getters. The demo will use BASIC to draw them and labels each A through G, because this is how the program ultimately will address them. They have names, too, although I'm open to change if anyone has better titles. For now they are A) Avery, B) Standard, C) Conventioneer, D) Notebook, E) Cloth Frame, F) Gaudy, and G) Parchment.

The windows use the top left corner as placement coordinates, but portholes don't have any corners, let alone an upper left corner. So portholes use a near-center set of coordinates, which the demo prints out. The spot is marked on one porthole in Figure A.

The big secret to speed was to forego the ROM CIRCLE routines and instead PRINT the paterns needed with a call to the ROM's simple printing routine using RST 10h. This puts the CHR$ code in the A register to any spot on the screen "But the 2068 has no characters like those.", you say? Its true, but the machine code tricks the 2068 into looking elsewhere for its character table by putting another address in CHARS, 2 memory locations at 23606 and 23607. If you should BREAK while running the demo, and CHARS has not been reset, the screen will look like arabic, cuneiform or worse. Type in GO SUB 4150 and it will restore CHARS giving you Sinclair english back again.

If space permits next time, we will look at restoring what was under the last window we drew -- a complex subject indeed! Until then fool with these programs and let me know if you discover anything. As always, if data entry isn't worth the eye-strain, I'll be happy to send you the complete version of Windows & Portholes as is available on a tape of three most requested programs (called Jazzofire: $9.95ppd) or with eight most requested (called Bingham's Best+: $12.95ppd). Please write to Paul Bingham, PO Box 2034, Mesa, AZ 85214. And keep those 2068s up and running. -pb

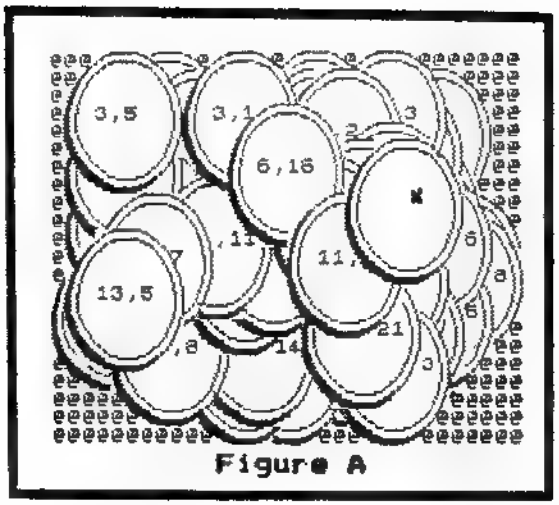

Figure A

```
1 REM  Window & porthole code
   5 FOR t=55000 TO 56163  READ
a: POKE t,a  NEXT t: DATA 213,19
7,229,245,217,8,213,197,229,245,
17,216,214,33,3,4
  10 DATA 125,1,3,15,185,40,5,12
,16,250,24,10,124,1,4,25,185,40,
6,12,16,250,33,10,16,34,118,92
1360 DATA 1,8,168,62,0,189,40 8,
60,245,120,145,71,241,24,245,120
,217,71,217,65,62,0,203,68,40,1,
129,203,33,203,44,16,245
1370 DATA 217,79,197,217,235,209
,229,1,112,0,9,126,254,128,40,16
,131,79,35,126,130,71,35,229,213
,205,62,38,209,225,24,235,35,233
1380 DATA 237,24,238,24,239,25,2
0,24,21,24,19,25,18,26,17,27,16,
27,230,16,231,16,231,17,231,18,2
7,16,26,17,26,18,25,19,24,20,24,
21
```


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WRITE FOR FREE CATALOG

Sharp's, Inc.
Rt. 10, Box 459
Mechanicsv lle, VA 23111
(804) 746-1664 or 730-9697

```
1390 DATA 231,235,230,236,231,23
6,229,237,230,237,231,237,229,23
8,230,238,231,238,228,239,229,23
9,230,239,231,239,24,236,24,237,
25,238,26,239
1400 DATA 239,228,237,229,238,22
9,239,229,236,230,237,230,238,23
0,239,230,234,231,235,231,236,23
1,237,231,238,231,239,231,16,229
,16,230,17,230,17,231,18,231,18,
231,128
1410 DATA 37,1,36,0,9,229,62,2,2
05,48,18,42,118,92,62,35,148,103
,62,27,149,111,69,76,205,20,9,1,
157,3,225,34,54,92,9,233
1420 DATA 0,0,0,0,0,0,0,0,0,0,1,6
,24,32,192,3,12,,63,192,0,0,31,2
24,0,0,,255,0,0,0,255,0,0,0,,128
,112,12,3,0,224,28,3
1430 DATA 12,24,48,97,194,132,13
6,8,,16,96,128,0,0,0,0,0,,130,65
,32,16,8,4,4,2,,7,6,14,12,28,24,
56,56,,16,32,32,64,64,128,128,12
8
1440 DATA 1,1,0,0,0,0,0,0,,16,8,
136,132,68,66,66,34,,49,113,113,
97,226,226,226,226,,34,33,33,17,
17,17,17,17,,226,226,226,226,226
,225,241,241
1450 DATA 17,17,17,17,33,33,34,3
4,,248,120,120,124,60,62,30,31,,
128,128,64,64,32,16,8,4,,0,0,0,0
,1,1,2,2,,68,68,132,136,8,16,16,
32,,132,194,225,240,248,252,255,
127
1460 DATA 0,0,0,192,32,24,6,129,
,0,0,0,0,0,1,6,24,,4,8,16,32,193
,2,12,24,,224,248,252,255,127,31
,7,0,,240,15,0,0,224,255,255,127
1465 DATA 1,254,0,0,0,255,255,25
4,,224,1,7,31,252,240,192,0
1470 DATA 1,6,24,32,96,224,224,2
24,,255,0,0,0,0,0,0,0,,224,224,2
24,224,224,224,224,224,,224,224,8
,1,1,1,1,1,,1,1,1,1,1,1,1,1,,1,1
,1,6,28,248,240,192,,224,224,224
,248,254,127,31,7,,0,0,0,0,0,255
,255,255
```

```
1475 DATA 63,32,239,232,232,232,
232,232,,255,0,255,0,0,0,0,0,,23
2,232,232,232,232,232,232,232,,2
55,1,253,5,5,5,5,5,,5,5,5,5,5,5,
5,5,,5,5,5,253,1,255,252,252,,23
2,232,232,239,224,255,255,255,,0
,0,0,255,0,255,255,255
1480 DATA 1,6,8,16,48,98,228,228
,,255,0,0,255,0,0,0,0,,228,228,2
28,228,228,228,228,228,228,,224,24,4
,194,34,17,9,9,,9,9,9,9,9,9,9,9,
,17,34,194,4,24,240,224,128,,225
,241,240,120,126,63,31,7,,0,0,25
5,0,0,255,255,255
1485 DATA 0,0,7,12,20,52,212,212
,,14,19,253,1,7,15,9,5,,212,212,
212,212,212,212,212,212,,0,0,255
,1,1,1,1,1,,1,1,1,1,1,1,1,1,,1,1
,255,2,254,4,252,248,,212,212,21
5,208,223,192,255,255,,0,0,255,0
,255,0,255,255
1490 DATA 0,63,42,250,230,254,22
5,255,,0,255,170,170,170,170,170
,255,,225,255,225,255,225,255,22
5,255,,0,254,170,174,178,190,194
,254,,130,254,130,254,130,254,13
0,254,,130,254,178,174,170,254,2
48,248,,225,255,230,250,234,255,
255,255,,255,170,170,170,170,255
,255,255
1495 DATA 123,196,192,202,192,23
5,66,202,,219,36,0,170,0,255,0,0
,,194,234,66,202,226,74,194,202,
,239,17,1,169,2,233,33,41,,33,41
,34,41,33,42,33,41,,33,233,2,169
,1,17,255,222,,194,235 64,202,19
2,196,255,247,,0,255,0,170,0,36,
255,183
1500 DATA 7,62,82,209,209,255,12
6,12,,255,0,0,0,0,0,0,0,,14,28,1
5,30,4,14,28,28,,240,30,9,9,9,30
,56,32,,16,48,64,32,16,16,32,32,
,16,30,9,9,9,30,248,192,,14,62,8
2,209,209,254,127,15,,0,0,0,0,0,
0,255,255
1510 DATA 62,33,215,62,34,215,62
,35,215,62,36,215,42,136,92,37,6
2,5,133,111,229,193,205,20,9,62,
37,215,62,38,215,6,3,62,32,215,1
6,251
1520 DATA 62,39,215,42,136,92,37
,62,7,133,111,229,193,205,20,9,6
2,40,215,62,41,215,6,4,62,32,215
,16,251,62,42,215,62,43,215,42,1
36,92,37
```

```
1530 DATA 62,8,133,111,229,193,2
05,20,9,62,44,215,6,6,62,32,215,
16,251,62,45,215,42,136,92,37,62
,8,133,111,229,193,205,20,9,62,4
6,215
1540 DATA 6,6,62,32,215,16,251,6
2,47,215,42,136,92,37,62,8,133,1
11,229,193,205,20,9,62,48,215,62
,49,215,6,4,62,32,215,16,251,62,
50,215
1550 DATA 62,51,215,42,136,92,37
,62,7,133,111,229,193,205,20,9,6
2,52,215,62,53,215,62,32,215,62,
32,215,62,54,215,62,55,215,42,13
6,92,37
1560 DATA 62,5,133,111,229,193,2
05,20,9,62,56,215,62,57,215,62,5
8,215,62,59,215,209,33,0,60,34,5
4,92
2000 DATA 241,225,193,209,8,217,
241,225,193,209,201
```

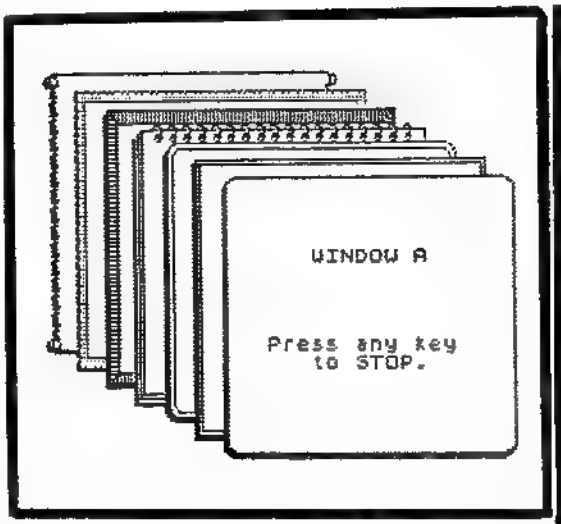


Figure B

w&p code's CKT:

1	35	4134
5	191	12997
10	254	9470
1360	316	14902
1370	324	17922
1380	350	13450
1390	337	18640
1400	405	21936
1410	328	13780
1420	348	11514
1430	361	12625
1440	372	17577
1450	443	17274
1460	360	14160
1465	147	6871
1470	576	25051
1475	590	28714
1480	585	26567
1485	582	25449
1490	640	39847
1495	607	29426
1500	577	20349
1510	353	15345
1520	362	15768
1530	353	16789
1540	360	16511
1550	355	16329
1560	260	11915
2000	109	5932

Figure C; Changes to Listing 2 of last issue:

-Lines 1200, 1210 & 1270 are fine & can be left intact.
-Lines 1240 and 1260 should be omitted.
-Lines 1205 and 1240 below are new and should be added.
-Lines 1220, 1230, 1250 & 1260 need to be altered. See the altered lines below to see how they should look.

```
1205 DATA 0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,255
1220 DATA 151,18,126,254,80,40,4
,,254,112,32,6,62,1,18,35,24,9,25
4,62,40,93,254,114,24,87,35,128,
214,43,203,87,32,107,71,198,1,16
,252
1230 DATA 229,213,213,33,9,0,25,
22,0,95,25,235,225,35,115,35,114
,209,225
1240 DATA 35,126,254,61,32,81,22
9,213,225,35,126,35,102,111,229,
26,254,1,32,23,213,225,1,185,0,9
,229,1,166,0,9,233,225,58,118,92
,119,35
1250 DATA 6,70,24,13,6,66,24,9,6
,69,24,5,6,71,24,1,225,86,213,24
,6,72,24,243,0,0,0
1260 DATA 62,0,205,48,18,62,69,2
15,62,82,215,62,82,215,62,79,215
,62,82,215,62,32,215,120,215,62,
44,215,241,254,13,40,1,215,205,9
,32,58,251
```

1205	155	3926
1220	352	16029
1230	178	8606
1240	355	17204
1250	236	8343
1260	364	18944

Figure C

Listing 2

```
3000 CLS : LET l=55000: FOR t=1
TO 44: PRINT "@@@@@@@@@@@@@@@@";
: NEXT t
3010 LET x=RND*28: IF x<4 THEN G
O TO 3010
3020 LET y=RND*17: IF y<3 THEN R
ANDOMIZE : GO TO 3010
3030 POKE l+14,y: POKE l+15,x: L
ET k=USR l
3040 PRINT AT y,x-2,INT (y+.5);"
,";INT (x+.5): IF INKEY$="2" THE
N GO TO 4000
3050 GO TO 3010
4000 LET x=0: LET y=0: LET chars
=23606: GO SUB 4150
4010 FOR g=103 TO 80 STEP -8
4020 PRINT AT y,x;CHR$ g;
4030 FOR h=x+1 TO x+18: PRINT CH
R$ (g+1);: NEXT h: PRINT CHR$ (g
+3)
4040 FOR h=y+1 TO y+14: PRINT AT
 h,x;CHR$ (g+2),"
   ";CHR$ (g+4): NEXT h
4050 PRINT AT y+15,x;CHR$ (g+6);
: FOR h=x+1 TO x+18: PRINT CHR$
(g+7);: NEXT h
4060 PRINT CHR$ (g+5)
4090 LET d=((g-80)/8+65): GO SUB
 4150: PRINT AT y+4,x+6;"WINDOW
";CHR$ d;AT y+9,x+3;"Press any k
ey": IF d<>65 THEN PRINT AT y+10
,x+2;"for next window.": GO SUB
4150: GO TO 4110
4100 PRINT AT y+10,x+5;"to STOP.
": GO SUB 4150
4110 IF INKEY$="1" THEN GO SUB 4
150: GO TO 3000
4120 IF INKEY$="" THEN GO TO 411
0
4130 LET x=x+2: LET y=y+1: NEXT
g
4140 GO SUB 4150: STOP
4150 POKE chars,0: POKE chars+1,
60: RETURN
4160 POKE chars,221: POKE chars+
1,214: RETURN
```

w&p demo's CKT:

3000	61	6283	4050	71	5872
3010	37	3295	4060	14	1134
3020	39	3633	4090	197	15682
3030	34	3576	4100	46	3679
3040	85	6062	4110	31	2924
3050	12	1190	4120	18	1931
4000	53	4413	4130	29	2742
4010	31	2137	4140	14	1434
4020	10	1869	4150	41	3440
4030	55	4790	4160	44	4446
4040	80	6465			

One More Word On "CK TYPE"

As promised I am continuing to use Stan Lemke's CK TYPE outputs to help readers with their listings. And I've even gotten mail from others saying they'll use it. Well, for all you hold-outs left I have written an even shorter one-line version! Its only ten programming lines long and when SAVEd can then be quickly MERGEd to give a quick report on your latest program entry. Try it out! It appears as listing 1.1 below.

```
9999 INPUT k$: LPRINT k$,"'s CKT
:"": LET d=256: LET g=23635: LE
T b=d*PEEK g+PEEK (g-1): FOR h=1
 TO g+2: LET e=0: LET f=d*PEEK b
+PEEK (b+1): IF f<>9999 THEN LET
 a=d*PEEK (b+3)+PEEK (b+2): LET
b=b+4: LET j=1: FOR i=1 TO a: LE
T e=e+(j+1)*PEEK b: LET j=NOT j:
 LET b=b+1: NEXT i: PRINT #2,f;T
AB 9;a,e;#3;f;TAB 9;a,e: NEXT h
```

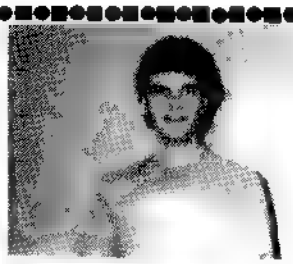
Listing 1.1

shortest version's CKT:

999	298	26607

TS Communique

Joe Williamson



A forum for people having problems with their 1000, 1500 and 2068. If you have any questions, send it to:

TS Communique
c/o Time Designs Magazine Co.
29722 Hult Road
Colton, OR 97017

I have a new 1985 Emerson 10" portable color TV model EC12P. It has a video input jack and I am using it for a monitor for a 2068.

My problem is that I get ghost images on the left of the cursor and other letters. A printed full horizontal line of graphic squares will be color smeared on the left side and very dark on the right side of the line. The same with a vertical line. How do I correct this?

Earl Dunnington
Boynton Beach, FL

Dear Earl,

From the circuit diagram you supplied, the video input to your monitor is well buffered and DC isolated so the problem probably does not lie in the monitor, but in the 2068 (assuming of course that the TV in general works OK). Try adjusting the sync & white level (VR1) control next to the speaker inside the 2068. This should help some, but if not, try using a different source on the monitor such as a VCR. If that works OK, try changing the value of R67 in the 2068 (to the right of the big capacitors) which will change the output impedance (not known for being standard). Try values between 50 and 470 ohms. -Joe

I have attempted on several occasions with a low degree of success to adapt our ZX81 and TS1000 to our Magnavox monitor. I first tried Les Soloman's fix (Computers & Electronics, years ago) which amounted in tapping off the video to the RF modulator but that resulted in an unacceptably dark picture. Disconnecting the video input from the RF modulator gave only a marginally better display even with brightness and contrast at maximum.

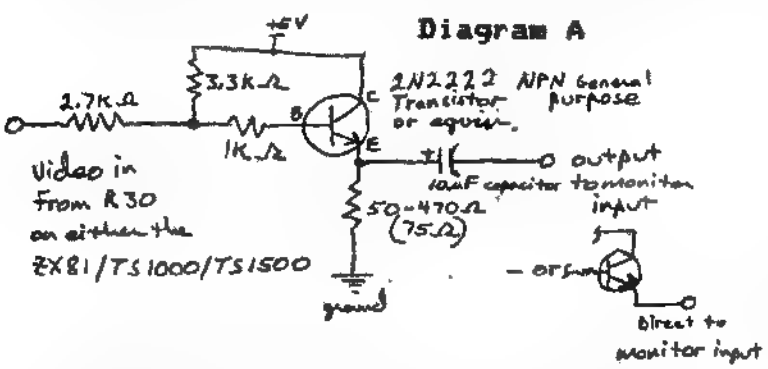
I then proceeded through all of my SYNTAXs and in a very early issue found a circuit which used a 2N2222 transistor. Experimentation with that circuit ended by lowering the the input resistor to the base of the 2N2222 to 600 ohms to produce an acceptable display. However, I abandoned the project when I saw the display go extremly bright during the LOAD and SAVE operations - I was afraid of damage to the monitor.

Additionally, the 2N2222 circuit pulled so much current out of the video that it considerably narrowed the good-loading range from a cassette recorder. I was using QLOAD which was always touchier than standard equipment. I guess that my question is: Is there a simple under-the-hood circuit that you know of that will do the job and avoid the problems mentioned above?

John E. Juergens
Pacifica, CA

Dear John,
Your problem has occured with many a TS enthusiast trying to connect their computer to a monitor - In fact, it happens with many other computer lines as well. The problem stems (as above) from the differences in input impedance of different monitors. Some have high input impedance others have low (75 ohm) input impedance and some are even switchable. As far as the actual input circuit, some have DC block input (a capacitor in series with the input) and some do not.

The SYNTAX circuit (DEC '81) was one of the better ones I have seen because it buffered the input and output of the circuit to protect LOAD/SAVE operations and provided the proper biasing of the transistor. The original circuit shown in the article just had the transistor and an emitter follower resistor as the output. With your monitor, you may want to try both of these output circuits. Try connecting the emitter of the transistor directly to the input of the monitor and also I would recommend using a 10 microFarad capacitor in the buffered version (to cut down on tearing and bending of characters) and try different value resistors from the emitter to ground in the range of 50 to 470 ohms. If the monitor is built right, 75 ohms should work the best. This circuit can also be used with the TS 1500. Also, don't worry about the brighter screen in LOAd/SAVE operations as the monitor limits high level inputs. -Joe



In answer to Regis Giacobbe's request on how to save TOMAHAWK to Ramex disk (JAN/FEB '88): TOMAHAWK's basic loader program contains a machine code program embedded in a REM statement to set up the screen and load the machine code. The code which it reads from tape is headerless.

Section 4.2 of the Technical Manual describes what a header consists of. TOMAHAWK doesn't use a header on the machine code block because the code embedded in the REM statement sets up the IX, DE, A, HL, and Flag registers with the necessary parameters to read the code block and calls the proper EXROM routine to read the code. After some "housekeeping" code, it then jumps into the TOMAHAWK game code and the game begins.

What many disk owners have done is to replace the final instruction which jumps into the game with a RET instruction which takes you back into BASIC. You can then SAVE the code with BASIC commands.

To SAVE TOMAHAWK, MERGE TOMAHAWK's BASIC loader into the 2068. Add on to the program the lines:

```
10 ON ERR RESET
20 SAVE [your system syntax] "TOMAHAWK.SCR" SCREEN$
30 SAVE [your system syntax] "TOMAHAWK.COD" CODE
27584,37952
40 STOP
50 ON ERR GOTO 10
60 POKE 26839,201
70 GOTO 1
```

Type as a direct command: RUN 50. This will LOAD the non-standard screen, the game code, and SAVE them to your disk. You can then make up a new loader program to LOAD the screen and game code and start the game by deleting lines 1, 3 through 10, and 50 through 70. Adjust lines 20 to 40 as follows:

```
20 LOAD [your system syntax] "TOMAHAWK.SCR" SCREEN$
30 LOAD [your system syntax] "TOMAHAWK.COD" CODE
40 RAND USR 61184
```

Save this loader to auto start at line 2. In general, when dealing with a headerless code block, you must use a disassembler/monitor to examine the set up code. Look for a block of code statements which assign values to the following registers:

IX - This will be the loading address in RAM memory
DE - This is the length of the code block
HL - In TOMAHAWK, this was set to the address of the EXROM routine which does the tape read
A - An FF stands for Data block
Carry Flag - Carry will be set for a load operation

In the case of TOMAHAWK, IX was 6BC0 hex, DE was 9440 hex, A was FF hex, Carry was set, and HL pointed to the EXROM tape read routine address. A call was then made to a routine which paged in the EXROM and jumped to the address pointed to by HL. Knowing this, it was easy to translate them into decimal values and make up the BASIC SAVE instructions.

Mike Finn
Philadelphia, PA

Dear Mike,
Thanks for the little on headerless program loading and for the info on converting TOMAHAWK to disk. -Joe

I own a TS 2068 and one Joystick. When playing games it works only in the left port. How can I get it to work in the right port? The right port is OK per a simple joystick test routine. Also, I use a Star Micronics STX-80 thermal printer with an AERCO Parallel Interface with my 2068 and it works great with TASWORD-TWO but I can not get it to print using TS/VU-CALC.

Arthur C. McDuffie
Keller, TX

Dear Arthur,
Most of the games that I have seen only "look" at the left joystick. Some do give you the option of using either joystick port, most do not. Unless its in BASIC, the only way you can change the joystick port is to know where the routine that looks at the joystick port resides in code and make the necessary changes. If its in BASIC, simply change it from STICK 1 to STICK 2.

VU-CALC would require you to use the print driver supplied with the AERCO interface. The program really needs to be modified to make full use of the larger printer, such as allowing more columns to be printed. I believe that there is a version that has been modified for full use of a full-sized printer. -Joe

In reply to Jim Powell's problem with the non-linearity of the TS 2040 printer, Timex is not the only one with this problem. I talked to a drafting teacher who works with IBM equipment and they have the same problem. Their solution is a software modification that corrects for the problem by multiplying the short axis by a correction factor. I'm not smart enough to do this but maybe someone out there is.

Don Balmer
Marquette, MI

Dear Don,
It seems to me that I read an article a few years ago on how to plot a (near) perfect circle on the screen using a correction factor. I am sure this same method could be used to print to the printer as well. Does anyone out there remember that article? I was not able to locate it. -Joe

When I hook my QL up to my Sears TV/Monitor/RGB and use it in the monitor mode (F1) the picture will not hold steady, it rolls. However, it works fine in TV mode (minus the 64 scan lines). Is there a means to remedy this without having to own two seperate monitors for each computer?

Michael E. Carver
Portland, OR

Dear Michael,
You hit the nail on the head when you said the 64 scan lines were gone! In essence, the vertical timing is changed and so the monitor won't lock up until the vertical hold is adjusted on the monitor to correct for the change. On my Sears monitor I am able to get a nice steady picture after adjusting the vertical hold in both TV and monitor mode although the control is more sensitive when in monitor mode. -Joe

My 2068 will no longer output color to either a monitor (Commodore 1802) or color TV. I've tried adjusting VR1, VR2, and VR3. While my display does seem to change shades of gray, its still not color. I'm going to try replacing the LM1889 chip (it's only $1.29) to see if that works. I'm also going to replace the 78L12 with a 78M12 suggested for the RGB interface to try and "clean up my screen" when I get an RGB monitor.

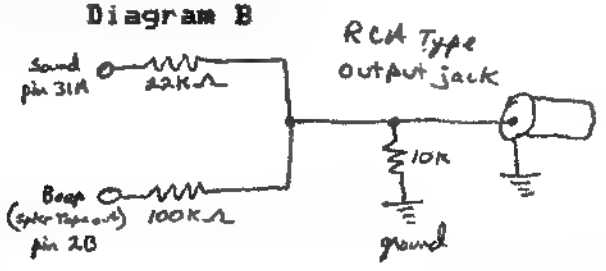
I would also like to hook up a jack that puts out both BEEP & SOUND. I'd also like information on the hardware required for bank switching or building an external RAM expansion.

Don Witfanood
USS Horne (CG-30)

Dear Don,
You need to adjust the capacitor inside the RF modulator (metal can at left rear of unit) for best color lock. Since you turned the other controls, you will need to play around with different settings until best results are obtained. If you still don't get color, you may have to replace the LM1889.

The BEEP & SOUND can be picked off the rear edge connector and sent to a seperate jack which can then be connected to one of those $12 audio amplifiers that Radio Shack sells. BEEP can be found on pin 2B (component side) and SOUND can be found on pin 31A (component side). Use 100K ohms in series with the BEEP connection and 22K ohms in series with the SOUND connection and the junction of these two to ground as shown. Watch for RAM expansion in the next issue. -Joe

Diagram B



I hope there is some help for this problem even though it's not exactly a Timex product. I have an A & J Microdrive. The driver relocation instructions with the unit are wrong in some way. The address for the "TABLE" is given at 62254 and 26255 which is a typographical error. In any case, the address I find is 8669 which I believe is wrong. I don't know enough about the addressing to solve this problem. Many programs ask to relocate the driver at 64000 or above. Is any help available to relocate the driver?

E. W. (Bud) Arbtin
Shawnee, KS

Dear Bud,
I believe the table you are looking for is at 26703 and 26704 which is the address of the printer output routine. At least thats the one thats changed for programs like Tasword II and Profile. for the 2040 printer this contains address 1280 which is the TS printer routine in ROM. This can be changed to address 64000 by poking 26703 with 0 and 26704 with 250 (0 + 256 * 250 = 64000). A & J may have an intermediate "TABLE" of some sort but the POKEs above should do it if thats the actual start of the printing routine. I'm really not that familiar with A & J's printer interface. -Joe

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SPEEDSCREEN, FLASHBACK, TYPE 22, and REFIELD

by Mike de Sosa

*Creative Codework's SPEEDSCREEN * * * * 1/2*

This is the highly regarded program which optimizes QL screen display handling. It replaces slower QL ROM routines, speeding scrolling, printing (in CSIZE 1,0), and window-drawing by a factor of four to twelve times depending on the operation. Available on Microdrive, disk, or ROM cartridge, SPEEDSCREEN is run before loading other programs which just seem to work faster; features not improved by SPEEDSCREEN (CZIZE 2, for example) work normally. The program also adds the following new features: extra commands to set-up character sets, eight new type-founts, new character sizes, and variable scrolling speeds. SPEEDSCREEN may be configured in eight versions to optimize different types of operations and software.

SPEEDSCREEN is at its fastest using CSIZE 1,0 type in white INK on black PAPER. Why not five stars? As a writer who was already using TurboQuill+ modified QL QUILL, I found SPEEDSCREEN disappointing. I paid a lot of money for little, if any, value. But I recognize its high potential for other applications.

*Sector Software's FLASHBACK * * * * * **

I gave this excellent, revolutionary program six stars out of five because I never expect to rate another program higher. FLASHBACK is a straightforward and easy to learn and use data storage program which underlays other programs, particularly QL QUILL or THE EDITOR, and provides fast search and data transfer to the working program. Files may be observed, edited, or created from within QL QUILL and data may be instantly transferred from a FLASHBACK datafile to QUILL.

Data is read or manipulated from a window of variable size and position overlaying the main program, providing almost a dual-screen capability. The FLASHBACK data files are extraordinarily flexible in format - really just a block of text with variable subdivisions. Consider the possibilities. Library (or legal or medical or business) notes may be made directly to FLASHBACK database files which may be sorted, searched and selected into sub-groups. Later, fields or entire records may be instantly transferred to QUILL or elsewhere.

With FLASHBACK, everything about files, records, fields, sub-records, etc., is flexible and easily modified, and the program may be operated on two levels: as a simple card-file or as a relational, interactive database. Quill_lis, Abacus_exp, Archive_exp and Easel_exp files may be read into FLASHBACK files. A FLASHBACK search is virtually instantaneous, doing in a few seconds, for example, SEARCH and SELECT, what took a few minutes in QL ARCHIVE. And FLASHBACK files cannot so easily be corrupted by human error. Not a database in the conventional sense, FLASHBACK should provide yeoman service in most "filing" and "transfer" operations not involving numerical computation, for example, I see no way of entering the instruction that field A is equal to field B divided by field C.

*Talent's TYPE 22 * * * 1/2*

This is a simulation of a British Royal Navy Type 22 frigate in action against various hostile threats (enemy aircraft, missiles, ships, and subs). The object: stay afloat as long as possible. This is best accomplished by shooting down enemy aircraft and sinking enemy shipping, by taking evasive action, and by the use of electronic countermeasures.

The frigate is equipped with a torpedo- and missile-equipped Lynx helicopter which can extend the range of over-the-horizon surveillance and attack and with air- and surface-search radar.

Once-removed from the standard arcade-game "zap the alien invader," TYPE 22 requires the use of some strategy and tactics, mainly prioritizing threats which must be dealt with in a logical order, damage assessment and control, and ship maneuvering. A scoring system rates your performance.

*Wood & Wind Computing's REFIELD * * * 1/2*

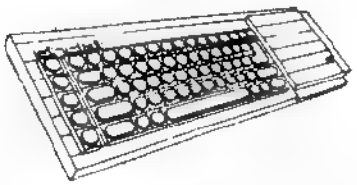
This is an American program designed to facilitate the addition of new fields to existing QL ARCHIVE database files. It is self-documented and quite straightforward--I managed to sail right through it the first time without recourse to the instructions which are included in the usual "_doc file." I deducted a star and a half because the program, though well-constructed, does not do a great deal, because the writtenn instructions could have been better (I have learned the hard way that instructions must be kept simple), and because of an obvious omission. The obvious omission, easily correctable in the next version, is the failure to include a method to create new numerical fields which are a function of one or more other numerical fields.

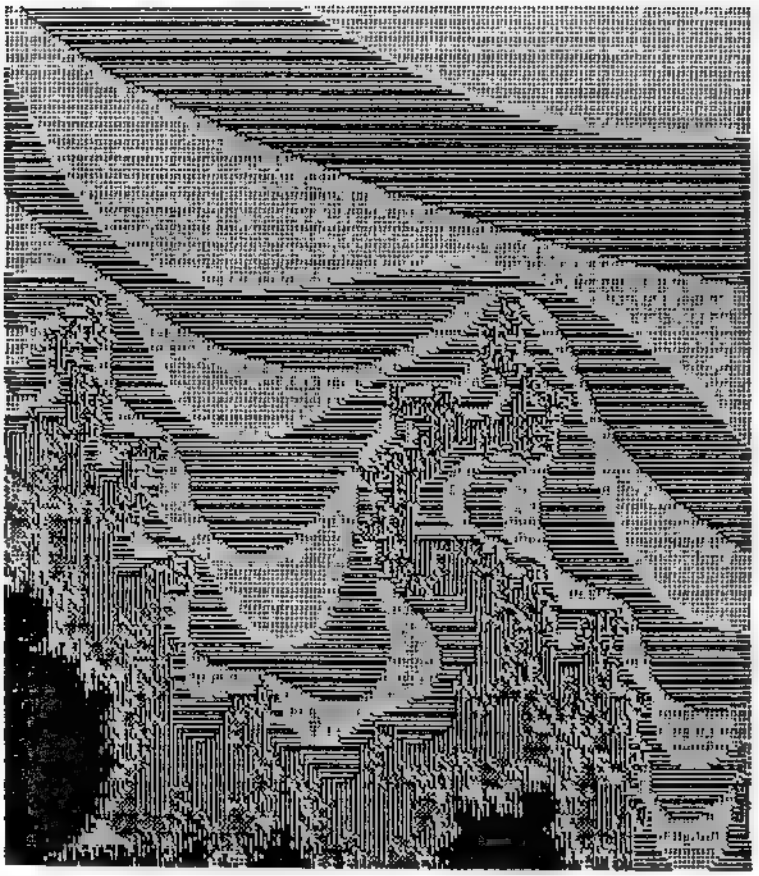
The first three programs may be obtained from your favorite Time Designs advertiser. Prices are now varying wildly so you may want to telephone shop for the best bargain. The last program is available from Time Designs.

NEXT TIME: TEXT87, an advanced new word processor for the QL, and other hot stuff.

MANDELBROT
-- A Fractal World
Part Four

Michael E. Carver





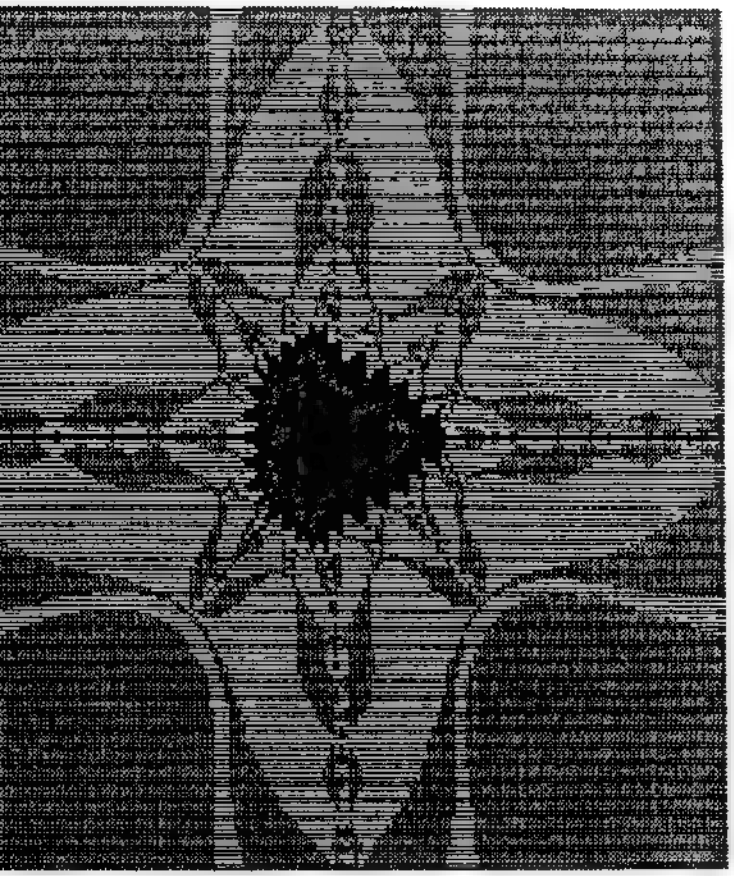
The author will provide the complete program (with sample Mandelbrot Set data) on Micro-cartridge or 5 1/4" disk (DS/DD only) for $7.50. Or, if the sender provides cartridge or disk--$4.00. Send check or money order to : Michael E. Carver, 1016 NE Tillamook, Portland, OR 97212.

Mandelbrot Source Code

```
| Mandelbrot -- machine code subroutine
| written by Michael E. Carver  3/30/87
|
| This program will do the recursive mathematics involved in calculating
| points within a Mandelbrot set.  Certain variables are carried over
| from BASIC (ci and cr)
|
| NOTE: Only do this step for a fresh start from BASIC
|
start   moveq #0,d0             insure return to BASIC w/out Error
        lea array(pc),a0        start of array data area
        lea arr_pt(pc),a1       location to pointer in array
        move.l a0,(a1)          store the pointer
        rts                     return to BASIC
|
| Enter here to calculate point in specified plane
| retrieve address of variables cr & ci from BASIC
calc    moveq #0,d0
        move.l $1c(a6),a1       end of name table (BV_NTP)
        add.l a6,a1             length of name table
        move.l a1,d5            store length
        move.w #$0202,d4        floating point type
        move.l #$02637200,d1    listed entry for cr
        move.l #$02636900,d2    listed entry for ci
        lea $28(a6),a0          start of list table (BV_NLBAS)
        move.l (a0),a2
        add.l a6,a2
        lea $18(a6),a0          start of name table (BV_NTBAS) mc variables
        move.l (a0),a1
        add.l a6,a1
loop    move.w (a1),d3          is it floating point type?
        cmp.w d3,d4
        beq.s flpoint
        bra.s nope
flpoint lea space,a4
        add.w 2(a1),a2
        move.b (a2)+,(a4)+      get offset to variables
        move.b (a2)+,(a4)+
        move.b (a2)+,(a4)+
        lea space,a4
        cmp.l (a4),d1           equal to cr
        beq.s found_cr          not always on word border!
        cmp.l (a4),d2           equal to ci
        beq.s found_ci
nope    lea $28(a6),a0          restore list pointer (BV_NLBAS)
        move.l (a0),a2

        add.l a6,a2
        addq #8,a1              update table pointer
        cmp.l a1,d5             end of name table?
        bhi.s loop              continue search
        bra.s set_up            done
found_ci lea ci_loc,a4          store address of var position
        lea $28(a6),a0          variable area (BV_VVBAS)
        move.l (a0),a2
        add.l a6,a2
        add.l 4(a1),a2
        move.l a2,(a4)
        bra.s nope
found_cr lea cr_loc,a4          store address of var position
        lea $28(a6),a0          variable area (BV_VVBAS)
        move.l (a0),a2
        add.l a6,a2
        add.l 4(a1),a2
        move.l a2,(a4)
        bra.s nope

space   dc.l 0
cr_loc  ds.l 1
ci_loc  ds.l 1
|
| move cr and ci to mc variable area and reset mc variables
|
set_up  lea cr(pc),a4           first variable space in
        movea.l cr_loc(pc),a3   store cr          area
        move.w (a3)+,(a4)+
        move.l (a3)+,(a4)+
        addq #2,a3              store ci
        move.w (a3)+,(a4)+
        move.l (a3)+,(a4)+
        moveq #8,d4             clear 9 words
```



```
zero

 clr.w (a4)+
 dbai d4,zero
 do floating point math


moveq #24,d1                    reserve space for 4 f.p. #'s
move.w #lim,a0                  (DV_CHRIX)
jsr (a0)                        go for it
move.l $58(a6),a1               new stack pointer if changed
lea count(pc),a4                start counter at 0
move.w #0,(a4)                  store it

bigloop

 lea zi(pc),a4                  put zr onto stack twice
 move.w 0(a4),6(a6,a1.l)        2nd item on stack
 move.l 2(a4),8(a6,a1.l)
 move.w 0(a4),0(a6,a1.l)        1st item on stack
 move.l 2(a4),2(a6,a1.l)        still points to zr
 move.l #0,d7                   get ready
 move.w ##0e,d0                 multiply TOS and NOS (RI_MULT)
 move.w #lic,a0                 do a math operation (RI_EXEC)
 jsr (a0)                       go for it

move.w 0(a6,a1.l),-6(a6,a1.l)   move result to bottom of stack
move.l 2(a6,a1.l),-4(a6,a1.l)
lea zr(pc),a4                   locate zr
move.w 0(a4),0(a6,a1.l)         put zr on stack twice
move.l 2(a4),2(a6,a1.l)
move.w 0(a4),6(a6,a1.l)
move.l 2(a4),8(a6,a1.l)
move.l #0,d7                    get ready
move.w ##0e,d0                  multiply TOS and NOS
move.w #lic,a0
jsr (a0)                        go for it

move.w 0(a6,a1.l),-6(a6,a1.l)   move result down on stack
move.l 2(a6,a1.l),-4(a6,a1.l)
sub.w #12,a1                    update m.s. pointer
move.l #0,d7                    get ready
move.w ##0c,d0                  subtract TOS from NOS (RI_SUB)
move.w #lic,a0
jsr (a0)                        go for it
```

```
lea cr(pc),a4                   locate variable cr
move.w (a4)+,6(a6,a1.l)         put on stack
move.l (a4),8(a6,a1.l)
move.l #0,d7                    get ready
move.w ##0a,d0                  add TOS to NOS (RI_ADD)
move.w #lic,a0
jsr (a0)                        go for it

lea ra(pc),a4                   locate variable ra
move.w 0(a6,a1.l),(a4)+         store result in ra
move.l 2(a6,a1.l),(a4)
sub.w #12,a1                    reset math stack pointer
move.l a1,$58(a6)               restore math stack pointer
move.w ##802,0(a6,a1.l)         put no. 2 as f.p  on stack
move.l ##40000000,2(a6,a1.l)
lea zr(pc),a4                   locate zr
move.w (a4)+,6(a6,a1.l)         put zr on stack
move.l (a4)+,8(a6,a1.l)         a4 will now point to zi
move.l #0,d7                    get ready
move.w ##0e,d0                  multiply TOS and NOS
move.w #lic,a0
jsr (a0)                        go for it

move.w (a4)+,6(a6,a1.l)         put zi onto stack
move.l (a4),8(a6,a1.l)
move.l #0,d7                    get ready to call multiply
move.w ##0e,d0                  TOS and NOS
move.w #lic,a0
jsr (a0)                        go for it

lea ci(pc),a4                   locate variable ci
move.w (a4)+,6(a6,a1.l)         put ci on stack
move.l (a4),8(a6,a1.l)
move.l #0,d7                    get ready
move.w ##0a,d0                  add TOS to NOS
move.w #lic,a0
jsr (a0)                        go for it

lea zi(pc),a4                   locate variable zi
move.w 0(a6,a1.l),(a4)+         store result in zi
move.l 2(a6,a1.l),(a4)+         now points to ra
lea zr(pc),a5                   locate variable zr
move.w (a4)+,0(a5)              store ra into zr
move.l (a4)+,2(a5)
sub.w #10,a1                    reset m.s. pointer to orig

;
; NOTE:  a5 still points to zr
;

move.l a1,$58(a6)               restore math stack pointer
move.w 0(a5),0(a6,a1.l)         put zr onto stack twice
move.l 2(a5),2(a6,a1.l)
move.w (a5)+,6(a6,a1.l)             #
move.l (a5)+,8(a6,a1.l)         a5 now points to zi
move.l #0,d7                    get ready
move.w ##0e,d0                  multiply TOS and NOS
move.w #lic,a0
jsr (a0)                        go for it

; result of zi*zi will be 2 numbers below following results
;

 addq #6,a1                     update m.s. pointer
 move.w 0(a5),0(a6,a1.l)        put zi onto stack twice
 move.l 2(a5),2(a6,a1.l)
 move.w 0(a5),6(a6,a1.l)
 move.l 2(a5),8(a6,a1.l)
 move.l #0,d7                   get ready
 move.w ##0e,d0                 multiply TOS and NOS
 move.w #lic,a0
 jsr (a0)                       go for it

 subq #6,a1                     reset stack pointer
 move.w -6(a6,a1.l),0(a6,a1.l)  move zr+zr up to bottom of
 move.l -4(a6,a1.l),2(a6,a1.l)                        stack
 move.l #0,d7                   get ready
 move.w ##0a,d0                 add TOS to NOS
 move.w #lic,a0
 jsr (a0)                       go for it

 move.l #0,d7                   get ready
 move.w ##04,d0                 truncate to word integer
 move.w #lic,a0                                 (RI_INT)
 jsr (a0)                       go for it

 move.w 0(a6,a1.l),d6           store result
 sub.w #22,a1                   reset m.s. pointer to orig
```

```
check     move.l a1,$58(a6)     restore math stack pointer
          lea count(pc),a4      retrieve counter
          move.w (a4),d5
          cmp.w #4,d6           reached upper limit?
          bge store             if so store in array
          addq.w #1,d5          increment counter
          move.w d5,(a4)        store counter
          cmp.b #255,d5         done enough times?
          bne bigloop           if not do some more

store     movea.l arr_pt(pc),a4 get array pointer
          move.b d5,(a4)+
          lea arr_pt(pc),a5     update pointer
          move.l a4,(a5)
          rts


;
; mc program variables
;

arr_pt    ds.l 1
count     ds.w 1
cr        ds.b 6                floating point
ci        ds.b 6                floating point
zr        ds.b 6                floating point
zi        ds.b 6                floating point
ra        ds.b 6                floating point
dump      ds.l 8                used during de-bugging
array     ds.b 2                address for array storage
```

Snapshot Source Code

```
;    snapshot and paste for mandelbrot program
;    will make a copy of a portion of screen before
     placing mini_window
;    and paste back original screen portion after removing
     mini_window
;    ****  written by Michael E. Carver 7/25/87  ****

;
;    enter here to make a copy of screen before opening mini_window
;

snapshot  move.l #131068,a1     first byte of mini_window area
          lea picture(pc),a0    picture array
          moveq #0,d0
          moveq #1,d1           counter for scan lines
s_loop1   moveq #1,d2           counter words per line
s_loop2   move.w (a1)+,(a0)+    transfer to picture array
          addq.b #1,d2          increase word counter
          cmpi.b #24,d2         completed scan line?
          ble s_loop2
          add.w #80,a1          next scan line start address
          addq.b #1,d1          increase scan line counter
          cmpi.b #36,d1         completed block?
          ble s_loop1
          rts                   done


;
;    enter here to paste back the "snap-shot" of screen
;

paste     move.l #131068,a1     first byte address of mini_window
          lea picture(pc),a0    picture array
          moveq #0,d0
          moveq #1,d1           counter for scan lines
p_loop1   moveq #1,d2           counter for words per line
p_loop2   move.w (a0)+,(a1)+    transfer to picture array
          addq.b #1,d2          increase word counter
          cmpi.b #24,d2         complete scan line?
          ble p_loop2
          add.w #80,a1          next scan line start address
          addq.b #1,d1          increase scan line counter
          cmpi.b #36,d1         completed block?
          ble p_loop1
          rts                   done

;
;    mc variables
;

picture   ds.w 864              picture array
```

Plotter Source Code

```
;  machine code routines to plot mandelbrot set to screen
;  written by Michael E. Carver  7/29/87

;
; enter here to redraw already calculated mandelbrot
; array data

start     lea m_point,a4            set m_point to zero
          clr.w (a4)                interger value of m_point
          move.w (a4),d1
          lea m_fp(pc),a2           change to floating point
          bsr convert
m_loop    lea n_point,a4            set n_point to zero
          clr.w (a4)
n_loop    lea array(pc),a2
          lea color(pc),a3
          bsr ink                   update pointer to array
          addi.l #1,(a2)            interger value of n_point
          lea n_point,a4
          move.w (a4),d1
          lea n_fp(pc),a2           change to floating point
          bsr convert
          lea m_fp(pc),a2
          bsr plot
          lea n_point(pc),a2        update x co-ord
          addi.w #1,(a2)            reached end of line?
          cmpi.w #199,(a2)          if not plot next point
          ble n_loop
          lea m_point(pc),a5        update y co-ord
          addi.w #1,(a5)            interger value of m_point
          move.w (a5),d1
          lea m_fp(pc),a2           change to floating point
          bsr convert               complete last line?
          cmpi.w #199,(a5)          if not plot next line
          ble m_loop
          rts
;
;  SUBROUTINES
;

;  **** Convert integer to floating point ****
;       entered with d1=integer value -- a2=address to store
;       result

convert   move.l $58(a6),a1         math stack pointer
          move.w d1,0(a6,a1.l)      place onto stack
          moveq #8,d0               RI_FLOAT
          moveq #0,d7               get ready
          move.w $11c,a0            RI_EXEC
          jsr (a0)                  go for it
          move.w 0(a6,a1.l),(a2)+   store result
          move.l 2(a6,a1.l),(a2)
          rts                       [illegible]

;  **** Ink ****
;  entered with a2=array pointer - a3=color table address
;

ink       moveq #0,d3               clear register
          move.l (a2),a4            get iteration count
          add.b (a4),d3             find corresponding color
          add.w d3,a3
          move.b (a3),d1
          moveq #$29,d0             set ink (SD_SETIN)
          move.l #$20002,a0         I.D. # for channel #2
          moveq #-1,d3              timeout
          trap #3                   go for it
          rts                       done

;
;  **** Plot ****
;  entered with a2=m_fp (floating point value of y co-ord)
;

plot      lea plot_s(pc),a1         plotting stack area
          move.w (a2)+,0(a1)        move m_fp to stack
          move.l (a2)+,2(a1)
          move.w (a2)+,6(a1)        move n_fp to stack
          move.l (a2)+,8(a1)
          moveq #$30,d0             SD_POINT
          moveq #-1,d3              timeout
          move.l #$20002,a0         I.D. # for channel #2
          trap #3                   go for it
          rts                       done
```

```
;
;  mc variables
;

array     ds.l 1              address of mandelbrot data array
m_point   ds.w 1              y co-ordinate
n_point   ds.w 1              x co-ordinate
m_fp      ds.w 3              room for floating point number
n_fp      ds.w 3              room for floating point number
color     ds.b 256            room for color data
plot_b    ds.b 224            room for plotting stack
plot_s    ds.b 16             pointer to top of plotting stack


;
;  enter here to plot mandelbrot set as it is being calculated
;

start2    lea m_point,a4
          move.w (a4),d1              interger value of m_point
          lea m_fp(pc),a2
          bsr convert                 change to floating point
                    *
          lea array(pc),a2
          lea color(pc),a3
          bsr ink
          addi.l #1,(a2)              update pointer to array
          lea n_point,a4              interger value of n_point
          move.w (a4),d1
          lea n_fp(pc),a2
          bsr convert                 change to floating point
          lea m_fp(pc),a2
          bsr plot
          lea n_point(pc),a2
          addi.w #1,(a2)              update x co-ord
          cmpi.w #199,(a2)            reached end of line?
          ble exit                    if not exit
          clr.w (a2)                  if end of line zero n_point
          lea m_point(pc),a5          and increment m_point
          addi.w #1,(a5)              update y co-ord
```

UPGRADING YOUR QL

by

Mike de Sosa

Despite the fact that the QL has been out of manufacture for some time and is now becoming somewhat scarce on your distributor's shelves, it is only just now reaching what may be called a fully developed, fully supported status. In fact, with the ever increasing amount of new software for the QL which is annouced each month or appears in the QUANTA (QL Users and Tinkerers Association) library, one wonders how much further one can go with the QL. One happy characteristic of the QL's 32-bit architecture and its Motorola 68008 microprocessor is its relative proof against obsolescence. I would say--as a non-technical expert--that within a year, emulators will be available for the QL which will enable it to run most popular brands (not types--but brands) of software!

In my book on the QL, Taking the Quantum Leap: The Last Word On the Sinclair QL (available from Time Designs Magazine), I describe a number of "ideal systems" for the QL, and these are still valid, but there have been a number of new products for the QL which must be considered as components of an "ideal system."

First and foremost, considering the logistical realities, is obtaining a second, "spare" QL. I don't think that I need elaborate why, except to say that--at the price of a new QL--it is sheer folly not to have another, either networked to your present QL or on the shelf. And, if you have a great deal of hardware and software for your QL, or a significant number of important files for your QL, you might even consider a second spare--what the hey?

Working from the inside of your QL out, you might consider replacement chips or components which better manage the heat generated by QL components to reduce the incidence of computer lock-ups. Replacement ROM chips are available which might improve your QL in many ways. Replacing your JSU chip with a JS or MG chip would, most importantly, eliminate the graphic incompatibility encountered with certain European software, and the replacement ROM chip may be ordered with built-in ICE, SUPER TOOLKIT II, QfLash or other software!

There are now a number of replacement keyboards for your QL. I have not reviewed any, because I like the QL keyboard. (I believe that the reasons why the QL keyboard is unpopular with some are threefold: it doesn't look like other keyboards, it is a soft-touch keyboard which is frequently damaged by heavy-handed hackers, and it has no number pad. The only valid criticism is the latter, and this only if you are a serious number-cruncher. A quality, smooth-operating, inexpensive numeric pad is a much-needed and long-awaited QL accessory.

I'm going to save monitors and printers for another day except for two points. A lot of new graphics software is being written for Epson FX-80 or RX-80 printers, so why not take the course of least resistance and buy one of these printers or a printer which is exactly compatible with them. Printer-driver installation is probably the most common problem for QL users. (In answering readers' questions about this, I have learnt a lot and will soon write an entire article on this subject.) The second point has to do with use of the Sears Color TV/Monitor as a suitable RGB monitor for the QL. At about $340, I recommended the Sears as a "best

buy" and personal favorite in my book. I do not have definite information, but it may be that newer models of this excellent comb-filtered TV and composite and RGB monitor do not work with the QL--there may be a vertical hold problem. If there is anybody out there using the QL with a new model Sears TV/Monitor successfully or anyone who has had a problem with it, please write me care of Time Designs. Since Sears has a very good "no-fault" return policy, there would be little risk if someone experimented here --the monitor has such good capabilities that it would be worth a try.

The next item to be considered is additional RAM for your QL. Extra RAM transforms your QL, its bundled software, and its use with many types of software, vastly improving it. You can add extra RAM internally or externally--usually as part of a disk interface. External RAM is faster than internal RAM. Miracle System's QL TRUMP CARD is a full-featured disk interface which offers the most extra RAM currently available, for a total of 896K; it has built-in dynamic and static RAMdisk firmware with a very fast Microdrive to RAMdisk copy feature, a dynamic printer buffer, a good screen-dump utility, a 128K RAM emulator, and Super TOOLKIT II. Sandy's SUPERQBOARD is another full-featured disk interface offering an extra 512K RAM, for a total of 640K; its RAMdisk and operating system (QRAM) are loaded separately as software--not a good feature--but it has has a parallel printer output and SuperMouse input. (I hear rumors that Sandy may soon have a 1-megabyte RAMpack for their SUPERQBOARD.)

It is quite feasible to operate a good QL system without disk drives. One of my QL set-ups has an old and outdated PCML 512K RAMpack with a number of TOOLKIT II commands and RAMdisk controller as firmware. But at least 256K of extra RAM is considered essential. A good compromise system would consist of a QL with 640K of available RAM and a single quad-density (1440 sectors per disk) dsk drive. I like 5 1/4" disks , personally, but I may just be old-fashioned.

Upgrading QL Software

The bundled Psion software programs for the QL are still hard to beat, especially QL ABACUS and QL EASEL, but there are new and promising substitutes for QL QUILL and QL ARCHIVE now available and on the horizon.

Digital Precision's THE EDITOR and SPECIAL EDITOR are somewhat more complex to use than QL QUILL, but, if you can can handle it (an admonition which could apply to all DP software), either of these offer most professional features. Neither of these are WYSIWIG, and the latter program (which has a 160-page manual) requires at least 128K extra RAM.

Software 87's *TEXT*^{87} is a new, full-featured word processor which, though favorably reviewed in the March 1988 QL World, is not quite ready for release. I have tested a preliminary version of *TEXT*^{87}, but I will not review it until it is ready for release.

QL QUILL has been much maligned, but it remains one of the best and easiest to use WYSIWIG word processors. Used with complementary programs like SPEEDSCREEN and/or TURBOQUILL+ and expanded RAM which speed-up and otherwise facilitate operation, QL QUILL remains a contender for "the best QL word processor," and when used with comprehensive multi-tasking software such as Sector Software's TASKMASTER (and SPELLBOUND plus PDQL's FILEBOUND), Compware's TASK SWOPPER (plus Cope's QATS Version 3), or QJump's QRAM, a database system such as FLASHBACK, and a desktop publishing system, QL QUILL can be the basis of a comprehensive word processing system which is much more than a regular word processor. QL QUILL remains a winner.

QL ARCHIVE may be nearing the end of a good run. Version 2.38 of ARCHIVE which permits "run-time" database applications is now available with full instructions from your supplier (U.S. QLs were supplied with Psion version 2.1 software; the latest and final QL QUILL, ABACUS, and EASEL editions are version 2.35). Ark Distribution's ARCHIVIST which makes good use of "run-time" ARCHIVE provides an excellent and easily modifiable general-purpose database system for those not interested in more esoteric database procedures--but for those that are, there are systems aplenty, more than for any other system.

Another contender here may be Creative Codeworks' brand new QUICKFAX, which I have not yet tested, which is billed as a data storage system which may be used as either "a card-file database or as a powerful data source for other programs."

What's going to kill off QL ARCHIVE, however, is a very important new program from Sector Software, FLASHBACK, which will revolutionize the use of the QL for non-mathematical applications. FLASHBACK provides the first dual-screen, integrated application of a fast, versatile database system to use with QL QUILL, and one that provides for instant transfer of data to the latter program! (See "Time Designs Tests.")

The latest versions of the QL's Psion software programs are now available and provide subtle improvements over the U.S.-supplied versions, except for QL ARCHIVE which offers more significant enhancements.

Two excellent products cited above are Athene Consultants' TURBOQUILL+ and Creative Codeworks' SPEEDSCREEN (see "Time Designs Tests") are both designed to speed-up cursor movement. SPEEDSCREEN is the more comprehensive program and works with most programs; TURBOQUILL+ just works with QL QUILL. The programs are compatible and may be used together, but they are somewhat redundant. As a writer I tend to prefer TURBOQUILL+ which has a handy Glossary utility.

Hot Tips: Modify your QL QUILL boot program and configure QL QUILL to place your program in RAM1_ and QUILL documents and Glossary items in RAM2 for faster operation. If using TURBOQUILL+ and FLASHBACK together, configure TQ+ for "less than full capitalization" and use TQ+'s TQP_CONFIG to configure your TQ+-modified QL QUILL program.

NEXT TIME: "Upgrading Your QL II: Graphics, Desktop Publishing, and Game Software," plus more hot tips.

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